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# JALT CALL

# Journal

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**T**he **JALT CALL Journal** (ISSN 1832-4215) is published by the JALT CALL SIG and encompasses and builds upon the SIG newsletter, *C@lling Japan*. It is committed to excellence in research in all areas within the field of Computer Assisted Language Learning, while at the same time offering teaching ideas and suggestions from teachers' personal experiences. *The JALT CALL Journal* will be published three times a year: in about April, August, and December.

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What is the importance of CALL in the language learning classroom in recent years? Are we capitalising on what CALL can do for us as language teachers, or are we starting to fall into the trap of using technology for the sake of the technology? This is a very pertinent question, and one that has been raised in many different contexts since the very early days of the field of CALL. It is important to take the time to think

about what specifically CALL can provide the language learning environment that can facilitate language learning in ways that supplement more traditional means. "Traditional" drill and practice activities enable learners to work alone and work on areas that they wish to develop without tying up the teacher. Modern technologies have brought with them several



facilitating features that have the potential to bring the world into the classroom and the classroom into the world. With the Internet and CMC, teachers and learners can be in touch with people and resources essentially anywhere and in any language. Mobile technologies allow learners to carry their learning with them. Multimedia has allowed video and audio images from anywhere to be seen and viewed on computers, mobile phones or PDAs. But what is this really adding to the learning environment? As CALL practitioners, we have a duty to consider what the addition of technology can do to the language learning process, and how we can design our learning environments such that CALL is playing an active and integrated role in the learning process. As an addition without clear and visible links to classroom practice and assessment goals, technology will continue to sit on the peripheral. Learners may engage in CALL tasks to satisfy their teachers, but how many of our learners continue to embark on CALL tasks after the bell has rung at the end of the class. These questions are not ones that have easy answers, and it is the responsibility of all of us to think of how we can design our CALL components such that learners can see the benefits of the technology and to instil a desire in them to take the initiative to continue with their learning anywhere and anytime.

*Glenn Stockwell  
Malcolm Swanson*

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# Computer-mediated language learning: Making meaning in multimodal virtual learning spaces

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The JALT CALL Journal

*This article argues that when using Internet-based computer-mediated communication technologies for language teaching and learning (e.g. email, internet relay chat, or, more recently, instant messaging and audio-conferencing), it is not sufficient to see the new learning spaces as replicates of conventional face-to-face settings. We suggest that it may be useful to consider how meaning is made using the modes and media available in electronic environments. This approach offers a new framework for the investigation of both the limitations and the possibilities of the new information and communication media and the modes they afford. It incorporates notions of design, authorship and dissemination, and the increasing importance of modes other than writing in virtual language learning spaces and can thus also contribute to an enhanced understanding of the phenomenon of new literacies. In this article we seek to demonstrate how this framework can inform the development of language learning and teaching in Internet-based environments, using an audio-graphic conferencing application as an example. We examine some of the demands made on tutors and learners and consider ways of meeting the arising pedagogical challenges.*

Technology has made it easier for many of us to communicate with others instantly and over a distance, with the new channels of communication offering us new ways of combining different modes such as text, audio and graphic within one medium – the personal computer (PC). These developments have had repercussions for second language teaching and learning – not just in distance education. Yet as Salaberry (2000) points out, if we want recent developments to constitute more than just a quantitative increase in interaction and a more obvious focus on

pedagogical principles than in the past and bring about qualitative changes instead, the following needs to be done:

*Materials designers need to assess critically the effects of the technological capabilities of Computer Mediated Communication (CMC) as well as the features that characterize a potentially new type of literacy. Such a critical assessment will have to be based on the analysis of how specific pedagogical objectives are achieved through the design and implementation of instructional activities in CMC environments. (p. 28)*

It is therefore not sufficient to see the new learning spaces as replicates of face-to-face classroom settings. Instead, we also need to take into account the fact that communication is mediated by the computer, thus factoring in the modes and affordances that the computer offers and considering how meaning is made in these new multimodal environments.

Multimodality – which Kress and van Leeuwen (2001) define as “the use of several semi-otic modes in the design of a semiotic product or event, together with the particular way in which these modes are combined – they may for instance reinforce each other [...], fulfil complementary roles [...] or be hierarchically ordered” (p. 20) – has always been part of meaning making. However, within Western society, especially in the context of education, there has been a “dominance of writing as the means of communication and representation” (Kress, 1998, p. 58). This dominance has lessened the significance of other modes. “The recent re-emergence of the visual has to be understood in that context: not as new in itself, but as new in the light of the recent history of representation, and of the nearly unshakeable commonsense that developed along with writing’s preeminence” (Kress, 1998, p. 60).

Over the past decades the visual mode (whose grammar is governed by simultaneity and spatiality) has been regaining ground and the current shift from the book to the screen contributes to this development, thus moving us “from print to post-print text cultures.” (Lankshear, 1997, p. 3). Kress (2003) goes as far as talking about a “revolution in the uses and effects of literacy and of associated means for representing and communicating at every level and in every domain” (p. 1). In the context of language acquisition, Stein (2004) therefore advocates “multimodal pedagogies” (p. 95) challenging the hegemony of language, particularly written language, in ESL classrooms.

The first section of this article examines the concept of multimodality and issues around literacy in general. Next we apply these general considerations to CMC and explore the practical implications for language teaching and learning in virtual multimodal environments. In the third section we consider the demands made on tutors and learners and explore how they could be assisted in making meaning in such environments and in developing electronic literacy, using an Internet-based audio-graphic conferencing system as an example. In the final section we draw some preliminary conclusions and point to issues that remain to be addressed.

## Different modes for making meaning

According to Halliday (1986), speaking and writing are used to make meaning differently and in different contexts; they are thus different ways of knowing and hence different ways of learning. Yet spoken language was not taken seriously for a long time, and only recently

"we have passed the peak of exclusive literacy, where only written artefacts had merit, and information resided only in the written message" (p. 98). He attributes this to the invention of the telephone. The popularity of television as well as more recent developments in computing show how writing is becoming even less dominant today as it competes with spoken *and* visual language.

In view of these changes in our so-called age of digitization – where we have witnessed a move from the dominance of writing to the dominance of the image, from the book or the page to the screen – Kress and others (see Kress and van Leeuwen, 2001; Kress, 2003) have further developed Halliday's ideas about making meaning. They see language as a complex system made up of written, spoken, visual and bodily resources (or 'modalities'), each with their own materialities and affordances for making meaning. Thus language is made up of different, "independent meaning-making systems, which are however co-ordinated so as to produce a single, if complex, integrated and differentiated text-message" (Kress, 2000b, p. 186). Today, the new media offer us the possibility to combine a variety of different modes in the making of texts<sup>1</sup>. Compare our situation with that of 50 years ago, when – other than writing by hand – all that people had access to in terms of two-way representational resources for communication over a distance was a typewriter, telegraphy and perhaps a telephone. Not only do we have a greater variety of media available today which offer different modes for making meaning but the computer also allows us to combine these modes more easily in an "orchestration of meaning" (Kress, Jewitt, Osborne, & Tsatsarelis, 2001). Moreover, the new meaning-making systems are not only available to a select few but the development of the electronic media, the fact that they are becoming increasingly cheaper and easier to use and their ensuing growth have meant that a large proportion of people in the Western world now have access to a multiplicity of modes for communication.<sup>2</sup>

Yet at the same time, the new technologies can also be seen to limit the way we make meaning. Cook (2003), for example, in an abstract of a paper entitled 'Various shades of grey' takes a less enthusiastic stance towards the new media and the modes they allow us to use:

*What has been gained through new technology is an enhanced ability to relay acts of communication; what has been lost are the modalities of objects, bodily presence, timing, space, weight, temperature, light and dark, touch, taste, smell, inebriation, and internal bodily sensation. What remains are often reduced acts in which the only modalities are those of writing, vision, and sometimes sound. 'Bi-modal' or 'tri-modal' might be more accurate terms for them than 'multimodal'. (n.p.)*

Kress and van Leeuwen (2001), however, claim that the "new technologies' emphasis on multimodality, three-dimensionality and interactivity can be seen as a return of many of the things that were lost in the transition from 'orality' to 'literacy'" (p. 92). Communication in today's virtual environments is characterized much less by formal writing than by casual chatting, both in written and spoken form. Such environments also empower their users by giving them access to tools which enable them to design, author and publish their own

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1 The word 'text' is used here in the wider sense of any artifact produced with the help of representational resources.

2 For a current discussion of the digital divide, see van Dijk, 2005.



multimodal texts in, for example, blogs or wikis. In the context of education, Warschauer (1999) concludes that "the decentered, multimedia character of new electronic media facilitates reading and writing processes that are more democratic, learner-centered, holistic, and natural" (p. 11). Influenced by The New London Group's (1996) programmatic publication on multiliteracies, Kress (2000a) sees the wider implications of such a view of multimedia communication and representation as follows:

*This newer theory of representation may prove adequate to the demands of several urgent tasks posed by wide social and economic changes, including the electronic technologies: the need for dealing with constant change; the need to treat individuals as agentive in relation not only to the production of their textual objects but also in relation to their constant remaking of their community's representational resources; the interaction of many semiotic modes in a text; and to do so from both the maker's and the reader's point of view. (p. 158)*

Stein (2004) takes this up, pointing out that "a semiotic theory that does not have an account of change at its core is inadequate to account for the ways in which the new information technologies are changing the landscape of communication" (p. 109). She thus argues strongly against theories of representation which see meaning making as "transmission, reproduction, or personal interpretation" (p. 109) and emphasizes the importance of the transformative activity of redesigning. "Through this process of design, culture is both sustained and transformed" (p. 110).

In this theoretical framework of multimodal meaning making, people are seen as agents who are making meaning and producing texts and who are also constantly remaking the representational resources in the process. The result is a situation of permanent change based on the "interested actions" of individual makers of texts or messages. Stein (2004) defines this "interest" as "a complex combination of the demands of the particular social occasion in which the text is produced including – among other things – contextual constraints of production" (p. 106)<sup>3</sup>. As a consequence, makers of text "stretch, change, adapt, and modify all of the elements used" (Kress, 2000a, p.155). Mobile phones are an obvious example for this process. Instead of using the speech facility, many users prefer the texting device – despite its obvious shortcomings (limitations in size and typing speed) – and consequently a whole new written mode has developed. Another example can be found in Palfreyman & al Khalil (2003) who describe Arab students using the Latin alphabet to write vernacular Arabic for 'secret' online messages. According to Kress (2000a), we should therefore no longer be talking about language use, but about the "constant remaking of resources in the process of their use" (p.156). For it is the individuals' needs and interests with their personal, cognitive, affective and social dimensions that together with task and institutional demands determine the direction of the remaking of the resources available to them – a process which Kress calls 'design' (Kress, 2000c, p. 340).

The new media have drastically changed conventional ideas of authorship on the one hand and of stability and authenticity of produced texts on the other. As Kress (2003) points out, the bi/multi-directionality of communication that the new media afford means

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3 Although Stein explores those constraints mainly in terms of the historical and socio-political context in which individuals and groups operate, her considerations do, in fact, also apply to the representational resources available in new media.

that authorship is no longer rare, making for greater democracy and a levelling of authority. At the same time, designing and editing texts in collaboration also means that authorship is not always clear-cut, and representations often have a more provisional nature. The new media also facilitate easy dissemination – for example, via websites, weblogs (blogs) or podcasts. Thus “the new technologies of information and communication bring together resources for representation and their potential with the resources of production and the resources of dissemination” (Kress, 2003, p. 23) within one tool.

These developments have resulted in a transformation of our concept of literacy. As Warschauer (1999) points out, “technological developments alone cannot account for changing conceptions of literacy. Rather, we must also take into account the broader social, economic, and political context” (p. 8). He calls it ‘electronic literacy’ (Warschauer, 1999); other terms used are ‘technoliteracy’ (Erben, 1999), ‘technological literacies’ (Lankshear, 1997) or ‘new literacy/literacies’ (Salaberry, 2000; Lankshear & Knobel, 2003).

With regard to learning in computer-mediated environments in general and CMC-based language acquisition in particular this implies creating a context where users of the new media can develop such literacies, taking advantage of the possibilities that are offered to them. In order to do so, we have to move away from an instructivist, teacher-led approach and take on sociocultural theories of learning which are based on notions such as the centrality of interaction with others and the situatedness of learning. Tutors have to learn to give up control in favour of their students; learners, who are more familiar with hierarchical and instructivist learning contexts, need to learn how to make the most of the democratic and learner-centred features that are inherent in many of the online environments available today.

### CMC: Media and modes for language teaching and learning

Royce (2002, p. 92) summarises some of the consequences of the new developments for language education:

*If making sense of (and constructing) texts requires the ability to understand the combined potential of various modes for making meaning, TESOL professionals need to be able to talk and think seriously about multimodal communication because they need to help learners develop multimodal communicative competence.*

Although Royce limits his statement to face-to-face teaching and learning of English, it is also true for other languages, and applies to virtual environments. Yet as Chun and Plass (2000) comment, “networked environments that allow learners to communicate using the full range of multimodal forms are relatively new” (p. 165), and we are only gradually finding out about the possibilities and constraints of CMC. What has happened to other media – that “in the history of [...] teaching each mode has been worked (shaped) differently to realize meanings appropriate for these purposes” (Kress et al., 2001, p. 13) – has only just started in relation to the new media. Thus, our practice is often characterised by trial and error, with a ‘culture’ only slowly developing and research is all the more important.

When comparing the modes and media of CMC with face-to-face instruction, the following similarities stand out. Both allow for multimodal representation (speaking, writing, using images), and both involve interaction with others (tutors, other learners, native speakers). It is therefore tempting to think that CMC can replicate a conventional classroom, especially

when we consider that it can incorporate a whole range of seemingly familiar modes – text, audio and graphics (e.g. still as well as moving images). Yet as Kress (2003) states, it is vital “to understand the meaning-potentials of the resources as precisely and as explicitly as we can” (p. 24) and to do so “we need to attend to the *materiality* of the resources, the *material stuff* that we use for making meaning” (p. 32). In CMC-based teaching and learning the ‘material stuff’ is the computer with its new possibilities for representation and communication. This includes the way in which modes can be combined and the way they function (e.g. in time with respect to the speed of communication over the Internet, or synchronicity/asynchronicity).

In *written computer conferences* text can be dealt with quite differently compared to more conventional communication over a distance or face-to-face settings. Learners can create text not only individually but also jointly as well as manipulate it easily. They can import it from other documents, save and retrieve it and exchange it electronically with other users. The fact that in synchronous written chat several participants can write at the same time creates a very different kind of discourse (including, e.g. different threads) compared with face-to-face settings. The speed with which messages can be exchanged also has an effect. Chat exchanges (and even asynchronous email) are much faster than conventional written exchanges, thus moving away from the ‘language of distance’ that characterizes conventional written language and approximating oral language (see Weininger & Shield, 2003). At the same time there is the lack of conventional paralinguistic cues which play a major role in spoken language in face-to-face settings, a lack which has given rise to other means of communication such as emoticons.

*Graphical elements* in CMC-based conferencing environments (in MOOs, e.g.) offer resources for making meaning by including the visual mode. Images can be created or imported and subsequently edited both by individuals as well as groups of learners. Icons (such as smileys and other emoticons) also act as means of communication.

*Audio conferencing* offers yet another mode. Although synchronous audio seems to resemble face-to-face communication, the lack of body language in voice-over-Internet exchanges has an impact on the nature of the interaction. Turn-taking, for example, is less straightforward than in a face-to-face setting and participants have to work out new strategies in order to sustain the communication flow. Lack of bodily representation also requires new ways of fostering socialization and community-building.

Using a *webcam* or *video* introduces body language into computer conferencing and entails new possibilities that are unknown in conventional face-to-face interaction. A videoconferencing tool like NetMeeting, for example, enables users to simultaneously see their interlocutors as well as a small image of themselves on the computer screen.

Today, these different resources can be combined into integrated virtual environments (e.g. in audio-graphic or videoconferencing applications), allowing users collaboratively as well as individually to represent their own meanings by writing, speaking, drawing and up- or downloading pictures. As well as giving them access to a vast range of materials on the Web, these environments allow for almost unlimited communication and interaction with the help of resources which are only a mouse-click away.

As a result all four language skills (i.e. reading, writing, listening and speaking) can be developed and practised. Synchronous written conferencing is a useful tool for collabora-

tive written interaction (Kitade, 2000) and – because of its synchronicity – it is also a forum where learners can prepare for spoken interaction. Audio and video conferencing allow for communication and joint production using both written and oral language. With the help of blogs, which are both production and dissemination tools, learners can discuss issues either privately or publicly on the Web. MOOs give students the opportunity to create virtual spaces on the Web jointly with others using graphics and written text (see Peterson 2001 for an examination of a number of MOOs dedicated to language learning). They thus allow students to interact and negotiate meaning (e.g. Schwienhorst, 2004) as well as rehearsing oral skills (Weininger and Shield, 2003). Wikis are websites where visitors can add content or change the existing content. The latest development is podcasting whereby initially amateurs produced audio texts which could be downloaded from the Web. This has expanded gradually to allow users to up- and download a whole range of audio texts. Godwin-Jones (2005) describes the technology and outlines its actual and potential uses in language learning.

So while it is true that in a number of respects CMC is restricted in comparison with face-to-face settings (e.g. with respect to representation and interaction through body language) and only allows for what might be perceived as 'reduced acts', it also provides new possibilities and opens up the field of language learning. Some researchers in communication and semiotics therefore argue that "the medium of communication does not appear to impair interaction, but rather seems to create a new environment with different features for the exchange and creation of information" (Salaberry, 2000, p. 33). The materiality of the representational resources offers us new possibilities which in agreement with Kress (2003) we see as a challenge rather than a limitation: "I have to use the possibilities given to me by a mode of representation to make my meaning" (p. 2).

The next section is concerned with the practical implications that the features of multimodal networked environments discussed here have for language learning and teaching. After looking at some of the demands made on learners and tutors we explore how they can be assisted in making meaning in virtual multimodal contexts, using the full range of modes available in order to contribute to a gradual increase in their multimodal communicative competence and thus their literacy skills.

## Learning languages with Lyceum

### *Background: language learning at The Open University*

*Lyceum*, the CMC environment at the centre of the second part of this article, is an Internet-based audio-graphic conferencing system developed in the late 1990s by the Knowledge Media Institute at the Open University. It is used in the Department of Languages to deliver online tutorials and to enable students to work collaboratively in their own time. The Open University is the UK's largest provider of modern foreign languages catering for approx. 7000 distance learners of Spanish, French and German. Over 80% of our learners have access to a computer. The average student age on our Beginners' language courses is 39, with continuing language learners being on average 44 years old.

The introduction of online tutorials happened in line with the university's decision to offer baseline IT provision for all students by 2002, and to make student access to IT

compulsory by 2005. The idea was that tools for creativity and production should be made available to learners and that greater access to ICT would also allow those responsible for the development of learning material "to select from a wider range of learning activities which offer more active, student-directed learning". This, in turn, would result in "greater emphasis on project work, creative production, and student-directed research using online e-resources." (Open University, 2000).

Participation in tutorials – up to 21 hours per academic year – is not compulsory and learners can complete a language course without ever taking part in any scheduled sessions. Yet students who do attend consider the tutorials to be an essential part of their learning and as crucial for developing confidence and fluency (see Hauck & Hurd, 2005). For the past years, learners have been able to choose between a course strand with face-to-face tutorials in one of the university's 13 regional centres or tuition via *Lyceum*.

### ***Lyceum: a multimodal networked environment***

In order to take part in a conference in the *Lyceum* environment, all participants need to have a PC with a modem to connect to the Internet and a headset with microphone. The system facilitates bi- and multidirectional communication, and learners and tutors can work together in real time communicating both through audio-conferencing and tools for the exchange of graphical and textual data. These include:

- Concept map: developed for concept mapping but also useful for taking notes, brainstorming ideas or displaying information;
- Whiteboard: for writing and drawing and for importing and manipulating Web images;
- Text chat: providing limited space for additional synchronous textual input;
- Shared document: for collaborative writing, discussing and editing longer texts.

*Lyceum* does not offer video or webcam facility but a number of tools can be used to compensate for the lack of body language (e.g., yes/no buttons, loudspeaker icon to indicate who is speaking, list of participants' names)

In this integrated virtual environment online language learners have a variety of choices. The different tools and the modes available can be used depending on their adequacy to convey a certain message (e.g. the *shared document* to design written texts in the target language, or audio for discussions). They can also be selected to fit the learners' modal preferences or sensory style(s) (e.g. the *whiteboard* for visual learners, the *voice facility* for auditory types). Drawing on all available resources, learners can "choose the most apt forms [...] for the representation of [their] meanings" (Kress, 2000a, p. 155). They can create and modify their input and combine modes (e.g. when using the *whiteboard* they can draw, import and edit images and accompany these by chunks of text). Their representations therefore tend to have a more preliminary and provisional character than more traditional written output in a face-to-face language class. This illustrates the range of possibilities for the remaking of resources offered by the new media and confirms the observations above about authorship, stability and authenticity of produced texts. At the same time it underpins the aforementioned observation regarding the levelling of authority.

A conferencing system such as *Lyceum* can be seen as a “packaged resource kit” (Kress, 1998, p. 65) within which language learners act as agents or designers, carrying out the constant transformation of resources depending on the personal, social, cognitive and affective needs and interests. The learning process itself can be characterised as a process of design, in which the degree of multimodal communicative competence and the degree of learner control are likely to be interdependent. Kress (2000c) characterises this interrelationship as follows:

*[...] the work of design: the intentional deployment of resources in specific configurations to implement the purpose of the designers. [...] the work of the text maker is taken as transformative of the resources and of the maker of the text. It gives agency of a real kind to the text maker. (p. 340)*

Operating in multimodal learning environments can therefore potentially contribute to an increase in learner autonomy as defined by Palfreyman (2003), that is, “the informed use of a range of interacting resources” (n.p.). However, in order to develop such autonomy and multimodal communicative competence, learners face a variety of demands.

## **New demands on tutors and learners**

If we want tutors and learners to operate successfully in environments such as *Lyceum*, a number of challenges need to be addressed. The most striking issues are the relevance of synaesthesia, critical use of modes, affective demands, and awareness of intercultural differences.

### ***Relevance of synaesthesia***

The human potential to make and represent meaning using more than one sense at a time, that is, the transduction of meaning from one semiotic mode to another, is crucial for language acquisition in multimodal virtual learning spaces. The interaction of different modes offering different possibilities of expression makes new cognitive demands on learners who need to be able to make full use of the required senses beyond their individual modal preferences. Learners in general and language learners in particular have always been required to shift semiotic material outside their modal ‘comfort zone’ and to transpose information from oral input, written text and visual clues. However, the varying degrees of embeddedness of modes in the new media and the resulting modal complexity turn language acquisition in virtual environments into a new challenge. Consider, for example, text chat by itself and text chat embedded within a more complex conferencing system such as *Lyceum*. Our experience shows that in the latter case students tend to use this mode of communication to express in writing what they see on the *whiteboard* or to comment on the oral discussion. At the same time they may also communicate their individual interpretations of what is happening in an online session in more general terms. On those occasions they often engage in so-called meta-talk which can result in getting side-tracked into exchanges on issues only marginally related to the actual content of a session. It therefore becomes increasingly important for users of the new electronic media in general and for language learners in particular to be ‘synaesthetically empowered’ and to be trained in the constant

simultaneous use of two or more modes for making meaning. It is an activity which is constantly performed by the brain and which allows skilled users of new electronic media to simultaneously process vast amounts of multimodal information on the Internet.

### ***Critical use of modes***

In addition to the regularities – the grammar – of spoken and written language, learners in integrated online environments have to familiarise themselves with the 'grammar' of other modes such as the visual. In order to make meaning according to their interests and to engage in the remaking of resources and the design process, language learners will have to become competent in both switching linguistic codes *and* switching semiotic modes and to do so consciously. On top of that they have to become 'fluent' in new codes such as online speech and writing *and* image. Stein (2004) points out that "the theory of multimodal communication marks a paradigm shift in language pedagogy from language to mode, to exploring what modes are and how they can be used to maximize learning" (p. 105). Like Kress and other researchers interested in multimodality, she concludes that the making of meaning involves the use of several semiotic modes each with its own grammar.

Modes carry memory, history and affect (Stein, 2004). Thus a negative association, for example, with writing through the medium of a computer will influence how language learners will engage with this mode. Their degree of familiarity with the conventions and the constraints of the modes available in a networked environment are in turn likely to have an impact on their "producerly pleasure", a concept introduced by Meskill (2003) to describe the "creative enterprise of co-writing and co-constructing meaning." She contends that users 'read' electronic texts in a producerly, multimodal way comparable to Barthes' writerly readings where pleasure is experienced due to the reader's intimate familiarity with convention (Barthes, 1975, 1989). Similarly, Meskill (2003) concludes:

*Electronic texts are inherently producerly due to our extensive experiences with and facility with their convention. Moreover, the socio-emotive responses to screens [...] support the notion that these encounters are inherently pleasurable, just as writerly readings are to those reading print. (n.p.)*

### ***Affective demands***

Considering that not all language learners are familiar with the conventions of virtual multimodal learning environments, the new media are likely to pose affective challenges. These include issues related to varying degrees of motivation (or even lack of motivation) and computer or language anxiety.

Researchers found that the stronger the learners' self-efficacy beliefs, the more challenging their learning goals will be and the more determined they will be to overcome obstacles in the learning process (Zimmermann & Bandura, 1994). This is particularly relevant in multimodal language learning spaces such as *Lyceum* which make both linguistic and technical demands on learners. Their self-efficacy and achievement beliefs have a direct influence on their choice of learning goals. What they believe about their effectiveness as learners and whether they believe that they can master certain skills – like those characterizing new

literacies – or a specific subject such as a foreign language is believed to have a direct influence on their choice of learning goals (Hauck, 2005).

### **Awareness of intercultural differences**

Finally, the learners' success will also depend on their level of intercultural awareness. Modes, making meaning and communicating are influenced by cultural conventions. With regard to the visual mode, Kress (1998) concludes:

*Global communication which relies on the visual may seem to offer a means of avoiding these problems [cultural imperialism]; paradoxically, they are at least as significant, though neither understood nor acknowledged – the visual apparently offering neutral means of communicating. The visual is, however, as much formed by differences of culture as the verbal is. (p. 57)*

### **Meeting the challenge**

Language learners in general and those operating in multimodal virtual environments in particular cannot be expected to deal with these demands by themselves but have to be supported by task designers and tutors. Learning style theorists (quoted in Klein, 2003) such as Barbe and Milone (1980, 1981), Jenkins (1988), Dunn and Dunn (1993), Carbo (1997), Leaver (1997) and Sarasin (1999) claim that students fall into modality types and learn best when taught through their preferred modalities. Accordingly instruction in *Lyceum* initially mirrored the so-called 'holistic lesson' where the same content was presented through several modalities. This approach seemed to be particularly well suited for teaching and learning in a multimodal virtual setting and reflects findings (Guri-Rozenblit, 1988; Mayer *et al.*, 1996; Moreno & Mayer, 1999a, 1999b; quoted in Klein, 2003) suggesting that students find it easier to understand and recall material when teaching happens via mixed representations.

Yet our experience with this environment clearly shows that – departing from the concept of the 'holistic lesson' – such representations should not be redundant, but rather complementary. Learning benefits are greater still if the representations are mixed in terms of modalities (e.g. written and spoken) rather than within the same modality (e.g. graphic and textual). Tutors are therefore encouraged to set up activities in a variety of modes: A brief written summary in the *concept map*, additional oral explanations via the *audio conferencing facility*, and pictures or drawings displayed on the *whiteboard* both complementing and illustrating the main teaching points.

Klein (2003) stresses that "most kinds of knowledge [...] involve representations of more than one modality" (p. 48) and that "most representations [...] engage many perceptual modalities" (p. 49), giving multimedia computer software as one example. Confirming this proposition as well as Kress's understanding of synaesthesia we found that learners tend to use one representational system before the others, but ultimately use all representational systems available to them. We have also seen, however, that those aware of their initial preferences can engage more easily in the remaking of resources and the design process. This has led to the development of a series of warm-up activities serving the following purposes:



- To raise learners' awareness of *Lyceum's* affordances and their individual modal preferences and thus contributing to the development of their multimodal communicative competence.
- To compensate for the loss of embodiment by helping learners to develop an online identity as well as getting to know each other.

There is – to the authors' knowledge – only one study which involves students learning a second language using multimedia and which reports positive effects of matching instructional modality to students' initial modal preference (Plass, Chun, Mayer, & Leutner, 1998). The participants retained more words studied in their preferred modality (or modalities) rather than in an alternative modality. Despite this evidence we agree with Klein (2003) that "representations that can be categorized as a single kind of system are less common [...] than those that combine two or more such systems" (p. 66). This seems to be particularly relevant when new multimodal media are used. Learners in such environments constantly have to deal with narrative texts accompanied by images or audio, prose texts with illustrations, images with audio, etc. with one being embedded in the other(s) to varying degrees.

Thus, when designing tasks for language learning in environments such as *Lyceum*, tutors need to take the right modality mix into account as well as the affordances of the different modes at their disposition, that is, their specific potentials for representation and making meaning, and their limitations. Taking a role play activity as an example, this has the following implications:

- Photos can be displayed on the whiteboard for illustration purposes. But this particular visual mode only affords a limited amount of narrative content.
- Written text can therefore be used to complement the visual input providing background information and relevant data in the shared document as well as briefs outlining the arguments to be represented by the participants in the concept map. In contrast to the spatiality of the visual mode, however, the linearity of the written mode requires learners to read which can be more time-consuming.

The activities encourage participants to shift semiotic material from the written and visual mode to the spoken mode to engage in oral discussions via *Lyceum's* audio-conferencing system. The learners' performance – or, to use Meskill's words, their producerly pleasure – on such tasks will depend on their familiarity with the relevant representations. This suggests that learning to create and interpret representations, that is, to make meaning using a variety of modes – text, graphics and audio – in an environment such as *Lyceum* and to deal successfully with the resulting simultaneity of several meaning making processes should be a learning objective in its own right.

Tutors will also need to be trained in the design of activities that make efficient use of multiple modalities to ensure that learners stretch, change, adapt and modify all elements available. In doing so they will gradually turn into skilled 'semantic traders' – experienced in the realisation of the affordances of a variety of modes – and thus systematically develop their electronic literacy skills.

## Preliminary conclusions

In this article we have looked at a new theoretical approach to CMC-based language teaching and learning using principles of multimodal communication in order to explore how

meaning is made in virtual learning spaces such as Internet-based audio-graphic conferencing. Our experience with *Lyceum* confirms Meskill's (1999) observation that "the engagement of multiple modalities (sight, sound, tactile, aural) is [...] a highly positive contributing factor for the language learning process" (p. 145), particularly in distance education, and that the new technologies can, in contrast to Cook's (2003) more critical stance, offer this kind of engagement. Our considerations also confirm Kress's (1998) claim that "multimedia production requires high levels of multi-modal competence" (p. 65). At the same time we acknowledge that competence in all modes of representation cannot simply be assumed. Moreover – just as in face-to-face learning environments – availability and dominance of modes varies from one virtual setting to the next. This has far-reaching implications which Kress (2000b) summarises as follows:

*The selection and concentration by a culture on one or several modes [...] opens up and facilitates my bodily engagement with the world in these specific ways. At the same time it closes off, or makes more difficult, an engagement with the world in other ways. [...] Assuming that we, as biological and physiological beings, are not all equally disposed to the forms most developed and valued by our culture, some members of one culture will be less well served than others. (p. 187)*

The cultural determination of modal preferences can also be extended to language learning in online environments. Thus, assuming that language learners are not equally disposed to the forms most developed in a certain online environment, some learners will be less well served than others or – in extreme cases – even find themselves excluded from the learning process. Other learners will be cognitively and affectively at an advantage over those whose initial modal preferences are not – or at least not immediately – catered for. This is made worse still by the aforementioned lack of cultural shaping with regard to the modes that the new media afford and the 'trial and error' approach which still prevails in many online classrooms.

Exploring the differences between face-to-face tuition and online interaction, Kötter (1999) identified "the reduced amount of context cues" learners receive and argues that "online environments will never accommodate the needs of each individual learner and that students using this kind of provision simply have to adapt to the specifics of its nature" (p. 339). However, this applies to any kind of setting, not just virtual learning spaces. It also underpins Salaberry's afore-mentioned observation that new environments simply offer different features for interaction and Kress's (2003) conclusion that this constitutes a challenge rather than a limitation.

These considerations illustrate the need to review our approach to language learning and teaching. It is not sufficient to equip learners with creative and democratic representational resources and expect that as a result student control over the learning process increases. Rather than continuing with the more instructivist approach used in many educational institutions and in line with Stein's (2000) call for 'multimodal pedagogies', we have to promote the kind of literacy required to use the new democratic learning spaces to their best effect, empowering learners "to choose the appropriate language for what they need to create or express; [...] to enable students to communicate in the language of the twenty-first century" (Lessig, 2004, p. 38). Only then can learners construct their own knowledge, become authors and disseminate their own productions. CMC can help students in this 're-sourcing

of resources', allowing them to act "as remakers and transformers of the representational resources available to them." (Stein, 2000, p. 336). This has significant implications for the way we teach and affects areas such as task design (see, e.g., Hampel, 2006), assessment and tutor training (see, e.g., Hampel and Stickler, 2005).

As we are witnessing the 'third wave of computing', mobile, wearable, and pervasive technologies offer communication environments including audio, video and 3D graphics allowing users and thus also language students to integrate CMC into the flow of their everyday activities. It therefore becomes increasingly important to use virtual learning spaces in a way that gives students control of meaning-making and enables them to cope successfully with the challenge of their communication and interaction being doubly mediated both by the foreign language and the learning context.

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# Implementing optimal spaced learning for English vocabulary learning: Towards improvement of the Low-First Method derived from the reactivation theory

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*The spacing effect is known to be one of the most robust phenomena in experimental psychology, and many attempts have been made to realize effective spaced learning for L2 vocabulary learning. This study, by incorporating structural elaboration as corrective feedback, attempts to improve a computer program for L2 vocabulary learning based on the Low-First Method, an algorithm which was developed to realize optimal spaced learning. The present experiment revealed that although structural elaboration did not contribute to effectiveness or time-efficiency, it significantly decreased the number of errors during learning. The effects of corrective feedback were also found to interact with individual differences in learners.*

Vocabulary knowledge constitutes an integral part of learners' general proficiency in a second/foreign language (L2) and is a prerequisite for successful communication (Nation, 2001). Research on vocabulary acquisition demonstrates that systematic rehearsal is essential for effective vocabulary learning. Rehearsal is defined as an activity to encode new information into our long-term memory through overt or silent articulation (Hulstijn, 2001). Unless they are rehearsed frequently, most new words will eventually be forgotten no matter how deeply they are processed at the first encounter due to the fragile nature of human memory (Ellis, 1995; Hulstijn, 2001; Nation, 2001).

In rehearsing lexical items, how to distribute rehearsal opportunities affects the effectiveness and efficiency of the learning activities. This paper investigates a computer

program based on the Low-First Method, an algorithm which was advanced in cognitive psychology in an attempt to realize the most optimal scheduling of rehearsal opportunities, and aims to improve its effectiveness and efficiency for L2 vocabulary learning.

## I Literature review

### *1.1 The spacing effect and L2 vocabulary learning*

Scheduling of rehearsing opportunities is usually divided into two types: spaced learning and massed learning. In spaced learning, rehearsal activities for a given item are spread over a longer period of time while in the latter, they are condensed into a smaller number of sessions. For a given amount of study time, spaced learning yields significantly higher recall rates than massed learning, a phenomenon referred to as a spacing effect (Baddeley, 1997; Hulstijn, 2001; Mizuno, 1996, 2003b).

Ellis (1995) notes that "[t]he spacing effect is one of the most robust phenomena in experimental psychology" (p.118). The effect has been unanimously supported by numerous psychological experiments since its discovery in the 19th century (Baddeley, 1997; Bahrick & Phelps, 1987; Ellis, 1995; Hulstijn, 2001; Mizuno, 1996, 2003b; Nation, 2001). Spaced learning is normally twice as effective as massed learning, and the effect is found for learning involving a wide range of materials from visual to verbal information including L2 words (Ellis, 1995; Mizuno, 2003b). The spacing effect also sustains over a relatively long period of time: Bahrick and Phelps (1987) observed the superiority of spaced practice eight years after learning.

In view of the reliability and significance of the spacing effect, many attempts have been made to realize effective and efficient spaced learning in the field of L2 vocabulary learning. Most studies have examined computer-controlled sequencing algorithms because computers can optimize scheduling of rehearsal opportunities by keeping a record of the learner's performance on individual words and presenting the words that need to be rehearsed most at the time (Ellis, 1995; Hulstijn, 2001; Nation, 2001). The weakness of the previous studies is that they have aimed to implement an effective spaced learning schedule without understanding the very cause of the spacing effect. Although the spacing effect has been extensively studied for more than a century (Baddeley, 1997), an explanation for its cause had not been agreed upon until the reactivation theory of spacing effects was proposed (Mizuno, 1996, 1998, 2003b).

### *1.2 The reactivation theory and the Low-First Method*

The reactivation theory attempts to explain the cause of spacing effects in terms of changes in memory reactivation. In spaced learning, it is discovered that memory reactivation at the subsequent learning trial is larger than in massed learning. Mizuno (1996, 1998, 2003b) hypothesized that it was these changes in memory reactivation that caused the spacing effect, which has been consistently supported by her subsequent experiments. Based on the predictions made from the theory and experimental results, Mizuno (2003a, 2003b) constructed a model consisting of equations to express changes in memory activity and a relationship between memory reactivation and the probability of recall. The reactivation

theory is significant not only because it adequately explains the cause of the spacing effect but also provides us with the concrete model, from which we might be able to work out the optimal spaced learning schedule (see Mizuno, 2003b, for details about the reactivation theory).

Based on predications made from the reactivation theory and the resulting model, the Low-First Method has been developed to realize effective spaced learning. The method, which consists of three principles, is the first algorithm to base itself on thorough understanding of the spacing effect (see Mizuno, 2003a, for details about the algorithm and its three principles), and its effectiveness has been consistently confirmed by a number of experiments (Mizuno, 2000, 2001, 2002a, 2002b, 2003a, 2004). Nevertheless, since the method was developed out of purely theoretical findings in the realm of cognitive psychology, it still suffers from a number of limitations and needs certain modifications to be useful for real-life L2 learners.

For example, Nakata (2006) argued that the effectiveness and efficiency of the program could be improved by modifying the feedback given to an incorrect answer. In all the studies on L2 word learning based on the Low-First Method, the subjects are required to type an English word from the equivalent Japanese translation as a cue. In order to successfully retrieve the English word, therefore, the subjects need to acquire not only the word form-meaning connection but also the correct spelling of the word. Nakata (2006) claimed that the corrective feedback used in Mizuno's studies, which required learners to take a look at and confirm the correct English word (Figure 1), might be useful for strengthening the word form-meaning mapping, but not necessarily facilitate acquisition of the spelling.

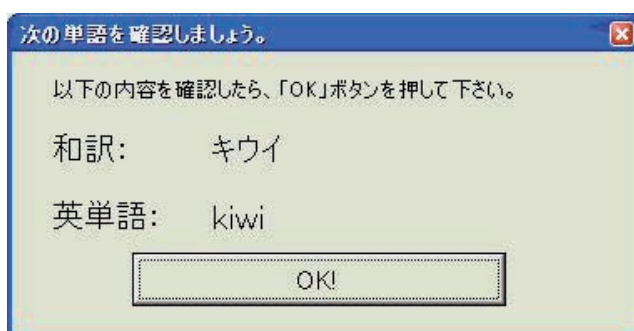


Figure 1. A replication of corrective feedback in Mizuno's studies

The rationale for his argument is that the feedback does not require *structural elaboration* on the part of learners'. Structural elaboration is defined as the "increased evaluation of an item with regard to its (phonemic, graphemic) structure" (Barcroft, 2002, pp.323-324). Examples of a task requiring structural elaboration are counting letters in a word, crossing out vowels in a word, or copying a word (Barcroft, 2002; Thomas & Dieter, 1987). Previous research shows that acquisition of the word form is facilitated by such tasks (Barcroft, 2002; Thomas & Dieter, 1987).



Nakata (2006) hypothesized that the Low-First Method would be more effective and efficient if structural elaboration were incorporated into the corrective feedback, providing a new kind of feedback. In his new feedback, the subjects were requested not only to take a look at but also to type the correct English word in a white box in a pop-up window (Figure 2). Unless they successfully did so, they could not proceed to the next item. In order to investigate the effects of the two kinds of corrective feedback, Nakata (2006) empirically examined learning with the Low-First Method under two conditions: a condition with structural elaboration as corrective feedback (Figure 2) and a one without (Figure 1). He named the former condition *+structural* condition and the latter *-structural* condition. His experiment revealed that contrary to his predictions, the *+structural* condition improved neither effectiveness nor efficiency: although the *+structural* condition required significantly longer study time, the differences in the immediate or delayed posttest scores between the two were not significant.

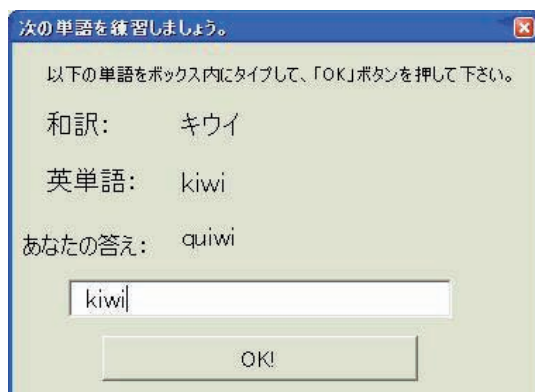


Figure 2. The new type of corrective feedback in Nakata (2006)

## 2 Hypotheses

The aim of the present study is to replicate Nakata (2006) to see if the results obtained by him will be reproduced. The following three hypotheses, which were the focus of the earlier study, will be examined:

- Hypothesis I: The *+Structural* condition will be more efficient than the *-structural* condition.
- Hypothesis II: The *+Structural* condition will be more effective than the *-structural* condition.
- Hypothesis III: The *+Structural* condition will be evaluated more highly by learners than the *-structural* condition.

Hypothesis I concerns the efficiency of each condition. In the Low-First Method, efficiency is measured by two dependent variables: *access times* and *study time*. Access times refer to the total number of times that the computer program tests target items before the

learning session is completed while the study time is the amount of time the learner needs to complete the learning session. Fewer access times and less study time are interpreted to indicate more efficient learning.<sup>1</sup> It will be hypothesized that +structural condition will result in significantly fewer access times and less study time than the –structural based on findings from Thomas and Dieter (1987) and Barcroft (2002). These two studies demonstrate that elaborate processing of structural properties of a word facilitates acquisition of its spelling. The +structural condition in the present study is expected to aid learners in acquisition of word forms and to decrease the number of spelling errors during learning, leading to a lower number of access times and less total study time compared with the –structural condition. In Nakata (2006), the +structural condition resulted in fewer access times than the –structural as predicted, but the difference fell short of statistical significance ( $p < .10$ ). He also observed that, unexpectedly, the words studied under the +structural condition required significantly more time (10.73 seconds per word) than those under the –structural condition ( $p < .001$ ), rejecting Hypothesis I. With the discrepancy between the hypothesis and the results reported by Nakata (2006) in mind, the present study aims to test this hypothesis with a larger population (66 subjects as opposed to 38 in the former study).

Regarding Hypothesis II, I will use scores on immediate and delayed posttests as an index of each condition's effectiveness. This hypothesis expects that the +structural condition will increase not only the efficiency but also the effectiveness of the Low-First Method by drawing the learner's attention to orthographical features of target words through structural elaboration. In Nakata (2006), average scores under the +structural and the –structural conditions (with standard deviations in parentheses) were 4.32 (0.67) and 4.24 (0.95) on the immediate posttest and 1.08 (0.98) and 0.98 (0.89) on the delayed posttest (the possible maximum score is five for each condition), and no significant difference was detected between them on either test. Considering the relatively low scores on the delayed posttest, it might be possible to speculate that the memory for the target items had decayed so much by the time of the test that we could not detect subtle differences between the two conditions. In this experiment, therefore, I have decided to give the delayed posttest four days after the treatment instead of a week and investigate whether the results yielded by the earlier study will be reproduced.

The first and second hypotheses lead to the third one. Learners will prefer the +structural condition to the –structural because it will be natural for them to favor a condition which is more efficient and effective. If Hypothesis III is supported, it will follow that the +structural condition has a more positive effect on learners' motivation because forcing learners to study in a condition that they do not like will have a negative effect on their motivation. Nakata (2006) found that in a questionnaire administered after the learning session, 36 out of the 38 learners (94.7%) replied that they perceived the +structural condition to be more helpful for learning. The overwhelming support for the +structural condition is expected to be replicated in this study. If some learners are found to deviate from the majority of learners and do not exhibit a preference for the +structural condition, their learning outcomes and other variables such as their English proficiency and familiarity with computers will be analyzed to identify possible factors that contribute to the variations in feedback preferences.

3 Method

3.1 Participants

The participants were 66 first- or second-year high school students. The subjects were assigned either to Group A or Group B so that there would be no significant difference in scores on the GTEC Test for Students,  $t(64) = -0.28, ns$ . The type of corrective feedback was a within subject variable, and the two groups experienced different kinds of feedback for different sets of words (Table 1).<sup>2</sup>

Table 1: Feedback assignment for Group A and B

	Items X	Items Y
Group A	+Structural condition	-Structural condition
Group B	-Structural condition	+Structural condition

Note. Items X = *grig*, *saliva*, *antic*, *cavity*, and *dike*, Items Y = *toil*, *loach*, *sentry*, *mane*, and *debris*.

3.2 Procedures

Firstly, a pretest was administered to ascertain whether the participants had any prior knowledge of the target words in the experiment. After the test, the subjects studied 10 English words using the same computer software used in Nakata (2006), which was programmed by him to replicate the Low-First Method. In the program, the subjects were presented with a Japanese translation as a cue and required to type the corresponding English word. If they typed a blank or incorrect response, corrective feedback was automatically presented. The program displayed different types of corrective feedback to words studied under the –structural condition (Figure 1) and the +structural condition (Figure 2). See Appendix A and B for the source codes of the –structural and the +structural conditions. The study session ended when all the 10 items reached the retirement criterion determined by the second principle of the Low-First Method (Mizuno, 2000).

Following the study session, the participants answered 10 two-digit additions as a distractor task. This task was included to faithfully replicate Nakata (2006) as well as Mizuno's original studies. Shortly after the distractor task, the subjects took the immediate posttest. They were required to recall the 10 target English words from Japanese translations. After the posttest, the subjects filled in a questionnaire, which requested them to evaluate the computer program used in the experiment and give some background information about themselves. Finally, four days after the study session, an unannounced delayed posttest was conducted. The test was the same as the immediate posttest except for the order of the items. In scoring the posttests, any misspelling was regarded as an incorrect answer, and no partial credit was given.

4 Results

4.1 Learning outcomes under +/–structural conditions

On the pretest, no one exhibited prior knowledge of any of the target words. Since feedback types for target items were counter-balanced between Group A and B students (see Table 1), and their English proficiency and prior knowledge of target words were controlled, it is assumed that the different outcomes obtained under the two conditions resulted solely from differences in feedback types. Table 3 in Appendix C summarizes and compares the average access times, study time, study time per access time (henceforth time/access), and posttest scores for words studied under +structural and –structural conditions.

In Table 3, the large standard deviation of the number of access times in the –structural condition, i.e., 16.47 as opposed to the mean, 29.83, calls for particular attention. A close examination of the data revealed that there were four learners whose access times in the –structural condition were greater than two standard deviations above the mean (66, 69, 97, and 110, respectively). By contrast, the top four largest access times in the +structural condition were 38, 41, 47, and 57. It looks as if learning under the –structural condition proved extremely inefficient for some learners while the +structural condition decreased errors successfully for most participants. Since their presence invalidates the use of a parametric *t* test, the four outliers were excluded from the following statistical analysis. As these four subjects were comprised of three Group A and one Group B participants, two Group B subjects with largest access times in the +structural condition (37 and 47) were also dropped to obtain an equal number of subjects in each group. For the remaining 60 participants, the differences in their performance were compared with two-tailed paired *t* tests to evaluate the two conditions’ effectiveness and efficiency (Table 2).

Table 2: Learners’ performance in +/–structural conditions (without outliers)

	n	+Structural		–Structural		Paired <i>t</i> tests		
		M	SD	M	SD	df	<i>t</i>	
Access times	60	24.33	5.69	26.00	6.93	59	-2.55	*
Study time (sec.)	60	277.35	108.67	227.52	98.07	59	4.93	***
Time/access	60	11.36	3.44	8.81	3.59	59	8.72	***
Immediate posttesta	60	4.35	0.84	4.27	0.97	59	0.71	
Delayed posttesta	55	1.89	1.42	1.93	1.33	54	-0.22	

Note. <sup>a</sup>The possible maximum score is five for each condition.

\*\*\* *p* < .001. \* *p* < .05.

As predicted by Hypothesis 1, average access times for the +structural condition were significantly smaller than those for the –structural, which suggests that structural elaboration successfully reduced errors during learning and allowed learners to complete the learning session more smoothly. Unexpectedly, the +structural condition significantly increased not only the time/access but also the total study time: the condition required 49.83 seconds

more than the –structural on average, and the hypothesis about the study time was refuted. Contrary to Hypothesis II, there were no significant differences in the immediate or delayed posttest scores. In short, except for the difference in the  $p$  values for access times ( $p < .10$  for the former and  $p < .05$  for the present study), the overall findings in this study were consistent with those reported by Nakata (2006), implying that the +structural condition was neither more time-efficient nor effective than the –structural condition. The reasons for the discrepancies between the hypotheses and results will be considered in the first part of the discussion section.

## 4.2 Evaluation by learners

In the questionnaire administered shortly after the immediate posttest, the subjects were requested to indicate which feedback they found the more helpful for learning. It turned out that 46 out of 65 learners (70.8%) favored the +structural condition, seven (10.8%) found the –structural condition more desirable, and the other 12 (18.5%) chose the option “Either one is OK” (they will be referred to as +Structural, –Structural, and *Either* learners, respectively).<sup>3</sup> With regard to their group assignments (Table 1), Group A and Group B subjects were almost evenly distributed across the three groups: while 23 +Structural, six *Either*, and four –Structural learners were from Group A, 23 +Structural, six *Either*, and three –Structural students came from Group B. All of the four outliers identified earlier were among +Structural subjects.

The participants were also requested to give reasons for their feedback preferences, and 40 +Structural, six *Either*, and six –Structural subjects provided an answer. Analysis of their comments revealed stark contrasts between the three groups (selected excerpts from the learners’ comments are presented in Appendix D). All of the 40 +Structural learners observed that typing English words helps memorization better than just looking at them. Four of them explicitly mentioned their dissatisfaction with the –structural condition. By contrast, none of –Structural learners noted that the –structural condition facilitated learning. Rather, they seemed to prefer the –structural condition because they felt that it was quicker or easier than the +structural. Those who chose the “*Either*” option replied that they did not perceive much difference between the two conditions.

With the majority evaluating the +structural condition more highly, the results constitute support for Hypothesis III. However, the reason why only +Structural learners perceived the facilitative effect of the +structural condition and the other types of learners did not requires further investigation. The possible factors that might have contributed to the variations in feedback preferences would be the differences in (1) their performance under +/–structural conditions, (2) their English proficiency, and (3) their familiarity with computers. The remainder of this section will attempt to describe the profiles of +Structural, *Either*, and –Structural subjects in relation to these three variables.

Firstly, in order to examine whether structural elaboration had different influence on the three groups, their performance under the two conditions were analyzed separately and compared with two-tailed paired  $t$  tests (for +Structural learners) or Wilcoxon’s signed-ranks tests (for *Either* and –Structural learners). The four outliers in +Structural group were deleted from the following analysis for the sake of statistical reliability. The analysis exhibits a few similarities and differences among the groups (Table 4, 5, and 6 in Appendix

C). The three types of learners were similar in that (1) the +structural condition had a tendency to increase both the total study time and time/access, and (2) no significant difference existed in test scores between the two conditions. One important difference seems to concern the access times in two conditions: although the +structural condition significantly decreased access times for +Structural learners, it did not for -Structural or Either learners. It seems quite natural that +Structural learners, for whom the +structural condition facilitated learning, evaluated the condition more favorably than the other two types of learners. It was also discovered that -Structural learners required the longest study time both in +structural and -structural conditions, which implies that they seemed to experience certain difficulties using the program and could not learn from it very efficiently.

Secondly, regarding their English proficiency, no significant difference was detected in GTEC scores among +Structural, Either, and -Structural students,  $F(2, 62) = 1.46, ns$ . Therefore, it is not very likely that the differences in feedback preferences were caused by those in their English ability. Lastly, as for their familiarity with computers, the questionnaire given after the immediate posttest inquired how often the participants used a personal computer per week. It was discovered that Either learners reported more experience with computers than the other two groups. While 10 out of the 12 Either students (83.3%) replied that they used a computer more than three days a week, only two out of the seven -Structural learners (28.6%) and 25 of the 46 +Structural learners (54.3%) did so. The implications of these findings will be discussed in the second part of the discussion below.

## 5 Discussion

### 5.1 Efficiency, effectiveness, and learners' evaluation of +/–structural conditions

The experiment showed that as predicted by Hypothesis I, the +structural condition resulted in fewer access times compared with the -structural condition and that the difference reached statistical significance while it did not in Nakata (2006). The difference between the two studies can be attributed to those in the number of subjects (38 for the previous and 66 for this study). The outcome of the present experiment seems to support the hypothesis that by directing learners' attention to structural properties of target items, the +structural condition reduced misspellings in their responses, leading to fewer errors and access times as a result. However, other than the difference in access times, the results of this study corresponded to those of Nakata (2006). In other words, despite the predicted advantages of structural elaboration, once again it was confirmed that the +structural condition was neither more time-efficient nor effective than the -structural condition. This section attempts to offer some interpretations for the +structural condition's lack of time-efficiency and effectiveness.

Firstly, regarding Hypothesis I, words studied under the +structural condition required significantly longer time than those under the -structural condition, and the results were consistent with those in Nakata (2006) ( $p < .001$  for both experiments). There seem to be two reasons for this finding. The first explanation would be the time-consuming nature of structural elaboration. +Structural condition in the experiments is likely to increase the time/access because it requires an additional task of structural elaboration while the -structural does not. In formulating Hypothesis I, I hoped that this shortcoming of the +structural

condition would be offset by its ability to decrease access times. However, it emerged that the benefits of a decreased number of access times did not outweigh the time-consuming nature of structural elaboration and that the +structural condition resulted in longer total study time than the –structural.

Another explanation for the lack of efficiency of the +structural condition could be due to its inflexibility. In the previous and present experiments, the +structural condition always required learners to practice spelling of any incorrectly answered item, sometimes even unnecessarily. For example, when learners failed items not because they did not know correct spelling but because they could not access the correctly stored L2 word form due to a relatively weak word form-meaning connection, structural elaboration might have been redundant. As Thomas and Dieter (1987) and Barcroft (2002) demonstrate, structural elaboration is effective only for acquiring structural properties of L2 words and does not necessarily strengthen word form-meaning mappings. +Structural condition in this experiment might have resulted in over-learning of already learned word forms, making the learning session less time-efficient than the –structural.

As for effectiveness, Hypothesis II was also rejected because there were no significant differences in test scores between the +structural and the –structural conditions. In view of the somewhat low scores on the delayed posttest in Nakata (2006), in this study the delayed posttest was administered four days after the treatment instead of a week, hoping that this would help detect subtle differences between the two conditions. The average scores for the delayed posttest in this study were indeed higher than those in the previous study. However, as in the earlier study, there were no significant differences in test scores between the +structural and the –structural conditions. Bearing in mind that the results yielded by the two studies were not in favor of Hypothesis II, it should be maintained that the +structural condition does not lead to more effectiveness.

It seems likely that the second principle of the Low-First Method (Mizuno, 2000) may account for the lack of significant differences in test scores. The +structural and –structural conditions differed in that the former required structural elaboration while the latter did not. However, since the second principle required learners to continue studying until  $P_n$ s, weighted cumulative recall rates, for all the items reached the preset retirement criterion (Mizuno, 2000), we can speculate that the principle guaranteed a certain level of retention of the items learned under either condition and that no difference was found in learners' final attainment. In sum, the results in the present experiment confirmed that although the +structural condition seems as effective as the –structural, it is a less time-efficient way of learning.

In terms of evaluation by learners, about 70% of the participants found the +structural condition preferable, supporting Hypothesis III. The dominant reason for this inclination appeared to be their perception that typing English words helped memorization better than just looking at them, an observation confirmed by the smaller number of access times in the +structural condition than in the –structural. It is also possible that since the activity required by the +structural condition was more relevant to the learners' goals in this study, to be able to type target items, it had more face validity for the learners than the –structural condition and thus, was evaluated more favorably.

## 5.2 Individual differences in the effects of +/-structural conditions

The comparison of +Structural, -Structural, and Either learners suggested an interaction between the effects of the corrective feedback and the individual differences in learners. Although the +structural condition significantly decreased access times for +Structural learners, it did not for -Structural or Either learners. This leads us to wonder why the +structural condition facilitated learning only for the particular group of learners. We have already seen that due to the lack of significant difference in GTEC scores among the three groups, it would not be appropriate to ascribe the differences to those in the students' English proficiency. An interaction between the types of target items and the effects of corrective feedback is not likely either because Group A and B students happened to be equally distributed across the three groups, and the target items were counter-balanced. Then, what caused the differences in the learning outcomes?

The differences between the three groups may be attributed to those in the time/access under the -structural condition and the learners' familiarity with computers. The analysis of the learners' performance indicated a difference in the time/access under the -structural condition between +Structural and the other two types of learners: while +Structural learners spent no more than 8.01 seconds per access in the -structural condition, the other two groups spent 10.45 seconds on average, and a Mann-Whitney  $U$  test confirmed that the difference was significant,  $U = 266.50$ ,  $p < .05$ . +Structural learners' relatively short time/access seems to imply that they closed the corrective feedback provided by the -structural condition without paying close attention to it. Therefore, they might have ended up repeating the mistakes in the subsequent trials, which was reflected in the significant difference in access times between the +structural and -structural conditions. For +Structural learners, who failed to learn effectively from corrective feedback in the -structural condition, the +structural condition facilitates learning and is desirable as they rightly evaluated it more favorably than the -structural. The time/access under the -structural condition of the four outliers identified earlier was also short (3.04, 5.13, 7.04, and 7.64 seconds per access, respectively). The records of these outliers seem to confirm the view that the short time/access is likely to lead to errors during learning and hence, result in an increase in access times.

By contrast, -Structural and Either students seemed to take enough time to confirm the corrective feedback in the -structural condition. As a result, they were more likely to give the correct answer in the following trials than +Structural learners, contributing to the non-significant differences in their access times between +structural and -structural conditions. For these two types of learners, it would be redundant to require structural elaboration as corrective feedback, and the quicker and easier -structural condition might have been sufficient. The next question would be why -Structural and Either learners disagreed on the questionnaire although their performance showed similar patterns. It may be possible that their familiarity with computers affected their responses. The questionnaire revealed that about 80% of Either learners used computers more than three times a week while less than 30% of -Structural learners did so. Since most of the -Structural learners had little experience with computers, the additional task of typing required by the +structural condition might have proven daunting or demotivating for them, contributing to their inclination towards the -structural. The comparison of the learning results also demonstrated that



-Structural group required the longest study time not only in the +structural but also in the -structural condition. This could be taken as further evidence for the speculation that due to their lack of familiarity with computers, typing with the keyboard presented challenges and turned out to be a time-consuming task for -Structural learners. On the other hand, as Either learners had more experience with and possibly more interest in computers, it is probable that they did not find the +structural condition particularly challenging and did not report aversion to the condition. It is also true that nearly half of +Structural learners reported their infrequent use of computers. However, since the +structural condition successfully decreased errors during learning for them, they probably preferred the +structural condition irrespective of their computer skills.

The results of the experiment also showed that while the -structural condition produced four outliers with a considerably large number of access times, the +structural did not. We can infer from these results that although the +structural condition reduced errors successfully for most learners, there are large variations in the extent to which the subjects can learn from the -structural condition. +Structural condition seems certainly redundant for -Structural or Either learners, but it may work in a complementary way to the -structural condition and serve learners for whom the -structural fails to facilitate learning.

In recent times, it has been widely recognized that the types of instruction interact with the individual differences in learners, and that these two factors need to be matched for effective L2 learning (Robinson, 2002). The third principle of the Low-First Method has enabled the program to adapt to individual differences in working-memory capacity (Mizuno, 2001, 2002b, 2003a), but naturally, there are more individual differences that need to be taken into account. The finding in this study seems significant because it offered a first step towards identifying such differences and demonstrated that incorporating structural elaboration into the program might make the Low-First Method better equipped to help learners with diverse learning styles. Of course, as the numbers of -Structural and Either students in this study seem a little too small to generalize, further research seems necessary in corroborating the interactions.

### ***5.3 Towards further improvements of the corrective feedback***

Although it was confirmed that the +structural condition did not lead to more effectiveness or efficiency, a discussion of whether the +structural condition is less desirable than the -structural requires further consideration for two reasons. First, the +structural condition might aid the program to adapt to individual differences in the subjects' learning styles. The condition seems especially desirable for those who do not pay close attention to the corrective feedback in the -structural condition and cannot benefit from it. The results also implied that the +structural condition might be able to help learners who would otherwise be outliers and suffer from an extraordinarily large number of access times in the -structural condition. Second, the amount of increased learning time for the +structural was not overly large (10.73 seconds per word in the former and 9.97 seconds in this study). Since the majority of the learners evaluated the +structural condition more favorably despite its lack of time-efficiency, it would be possible to maintain that the extra time needed for the +structural might be in fact negligible.

Since the +structural and -structural conditions appear to have their own advantages, if further improvement is made to the program, integrating both conditions into one type of

feedback might be desirable. The easiest way to do so would be to add an "Exit" button to the corrective feedback provided by the +structural condition (Figure 3). In this new type of feedback, when learners feel the need to practice spelling, they can do so by typing the word into the box and click on the "OK" button to get it corrected. Otherwise, they can just take a look at the answer and choose to close the pop-up window by clicking on the "Exit" button. This type of integrated feedback has advantages of both +structural and the –structural conditions and might be able to satisfy learners' needs with more flexibility than either one alone.

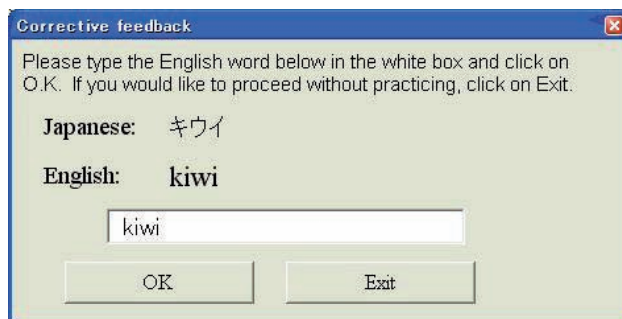


Figure 3. A new type of feedback incorporating + and – structural conditions

## 6 Conclusion

Although the robustness of the spacing effect has been demonstrated for more than a century, researchers in the past have not been able to take full advantage of it because of the lack of understanding of its cause. The Low-First Method is expected to contribute to the implementation of optimal spaced learning considerably because it is based on the reactivation theory, the first theory to offer a coherent explanation for the cause of the spacing effect. The findings of this study are significant because they suggest that incorporating structural elaboration into the Low-First Method may help the program decrease access times and also adapt to individual differences in learners, contributing to possible improvements of the program.

At the same time, more research is needed to address some limitations of the previous research on the Low-First Method. Firstly, the studies on the Low-First Method including the present one have addressed only limited aspects of vocabulary knowledge, namely, the written form and the form-meaning connection. It might be valuable to investigate how other aspects of word knowledge such as the spoken form or grammatical functions can be learned with a program based on the Low-First Method. The second limitation would be the relatively short duration of the experiments. All the studies on the Low-First Method have adopted a one-shot approach, where the learning session usually takes no more than 20 minutes and is completed in one day. In view of the incremental nature of lexical acquisition, further research is necessary to examine whether the Low-First Method can assist learners in managing retrieval opportunities distributed over a longer period of

time. Considering that the spacing effect is too powerful to be ignored by any instructional program (Ellis, 1995), these attempts to improve the Low-First Method will offer valuable implications for L2 vocabulary teaching pedagogies.

## Notes

\* This paper is partly based on the author's presentation at JACET English Vocabulary Group Second Conference held in December, 2005.

- 1) The Low-First Method continues to test items until the  $P_n$ s, weighted cumulative recall rates, for all the items reach the preset retirement criterion (Mizuno, 2000). Consequently, the fewer errors a learner makes, the fewer access times and the less study time s/he needs to complete the learning session. A lower number of access times and less study time, therefore, are the result of a learning session with fewer errors and an indication of more efficient learning.
- 2) In order to minimize the effects of the subjects' prior knowledge, words that were ranked as low-frequency ones in published word lists were chosen as target words. The words were divided into Items X and Items Y so that learning difficulties measured by ranks in the word lists and number of letters would be distributed as evenly as possible.
- 3) The total number of the subjects is 65, not 66, because one learner did not provide an answer to the question.

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## Appendices

### Appendix A

#### Source codes for the –structural condition (in Visual Basic for Excel Version 6.0)

```
Private Sub UserForm_Activate()  
    Directions.Caption = "以下の内容を確認したら、「OK」ボタンを押して下さい。"  
    CueBox.Caption = Question 'Display the Japanese translation for the target item.  
    ResBox.Caption = Answer 'Display the correct answer.  
    OKButton.SetFocus  
End Sub  
Private Sub OKButton_Click()  
    Unload Me  
    LowFirst.RedoAction 'Exit the pop-up window when the OK button is clicked.  
End Sub
```

Appendix B

Source codes for the +structural condition (in Visual Basic for Excel Version 6.0)

```
Private Sub UserForm_Activate()  
    CueBox.Caption = Question 'Display the Japanese translation for the target item.  
    ResBox.Caption = Answer'Display the correct answer.  
    Directions.Caption = "以下の単語をボックス内にタイプして、「OK」ボタンを押して下さい。"  
    AnswerBox.IMEMode = fmIMEModeOff: AnswerBox.SetFocus  
    If IncorrectAns <> "" Then 'Unless the learner typed a blank response, do the  
        following.  
        YourAnswerLabel.Caption = "あなたの答え"  
        YourAnswerBox.Caption = IncorrectAns 'Display the learner's incorrect  
            response.  
    End If  
End Sub  
Private Sub OKButton_Click()  
    If AnswerBox.Text = Answer Then 'If the learner typed the correct answer, do the  
        following.  
        Unload Me: LowFirst.RedoAction 'Exit the pop-up window.  
    Else 'If the response is incorrect, do the following.  
        Directions.Caption = "もう一度スペリングを確かめて、入力して下さい。"  
        YourAnswerBox.Caption = AnswerBox.Text 'Display the incorrect response.  
        AnswerBox.Text = "": AnswerBox.SetFocus 'Clear the white box.  
    End If  
End Sub
```

Appendix C

Supplementary tables

Table 3. Learners' performance in +/-structural conditions

	n	+Structural		-Structural	
		M	SD	M	SD
Access times	66	25.94	7.81	29.83	16.47
Study time (sec.)	66	294.36	126.15	244.12	112.97
Time/access	66	11.35	3.51	8.66	3.61
Immediate posttesta	66	4.18	1.08	4.11	1.20
Delayed posttesta	61	1.74	1.44	1.84	1.34

Note. <sup>a</sup> The possible maximum score is five for each condition.

One participant was absent on the day of the delayed posttest. Four students who reported in the questionnaire that they had studied some of the target words between the study session and the delayed posttest were excluded from the analysis of the delayed posttest, making the *n* for the delayed posttest 61.

Table 4. +Structural learners' performance in +/-structural conditions

	n	+Structural		-Structural		Paired t tests		
		M	SD	M	SD	df	t	
Access times	42	24.69	6.45	26.48	7.33	41	-2.16	*
Study time (sec.)	42	265.98	104.23	213.29	88.03	41	4.19	***
Time/access	42	10.72	2.96	8.01	2.23	41	9.55	***
Immediate posttest	42	4.26	0.91	4.19	1.04	41	0.50	
Delayed posttest	40	1.98	1.51	2.15	1.42	39	-0.87	

Note. \*\*\*  $p < .001$ . \*  $p < .05$ .

Table 5. Either learners' performance in +/-structural conditions

	n	+Structural		-Structural		Wilcoxon's	
		M	SD	M	SD	Z	
Access times	12	24.83	7.25	25.33	7.36	-0.28	
Study time (sec.)	12	305.08	117.52	237.83	106.96	-2.39	*
Time/access	12	12.51	4.45	10.00	6.30	-2.12	*
Immediate posttest	12	4.42	0.90	4.25	0.87	-0.65	
Delayed posttest	12	1.67	1.30	1.33	0.78	-0.86	

Note. \*  $p < .05$ .

Table 6. -Structural learners' performance in +/-structural conditions

	n	+Structural		-Structural		Wilcoxon's
		M	SD	M	SD	Z
Access times	7	26.86	6.26	26.43	6.37	-0.11
Study time (sec.)	7	372.43	207.05	299.14	115.96	-1.02
Time/access	7	13.36	4.67	11.23	2.77	-1.52
Immediate posttest	7	4.71	0.49	4.86	0.38	-0.58
Delayed posttest	4	1.25	0.96	2.25	0.50	-1.63

Note. All values are not significant.

Appendix D

Selected excerpts from the learners' comments about the corrective feedback

+Structural learners	"I felt typing out the spelling made it easier to memorize," "With this [the +structural condition], I can memorize by using my eyes, hands, and mouth," "Typing helps me analyze word structure," "I ended up not confirming the answers very well when they just appeared on the display," "I cannot remember by just looking."
-Structural learners	"I can confirm the answers quickly," "This [the -structural condition] is simple and easy," "Typing a correct answer is tedious."
Either learners	"They [types of feedback] did not make any difference to me," "I could memorize words in either way."

Note. Learners' comments were originally written in Japanese and translated into English by the author.

About the author

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# Online tutorial support in open distance learning through audio-graphic SCMC: Tutor impressions

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*The adoption of audio-graphic conferencing brings with it changes to the learning experience for tutors and students alike. These need to be researched to gain an insight into the learning experience of those teaching and being taught through the medium. One of the conferencing tools that has been utilised for much of the documented research on audio-graphic conferencing is the Lyceum software, used at the UK Open University since 2002 to provide tutorial support for higher level language learners. The use of the software has been reported at different stages, from the pilot projects since 1997 (Hauck & Haezwindt, 1999; Shield 2000; Kötter, 2001; Hewer & Shield, 2001), to reports of the mainstream use (Hampel, 2003; Hampel & Hauck, 2004). It seems logical that the next step should be to research into the tutors' experiences of the audio-graphic tool, which is a key element in the CALL research agenda (Warschauer, 1997; Debski & Levy, 1999). As the Open University prepares to phase out the software and replace it with a Moodle-based open-content audio-graphic synchronous conferencing tool, the insight into teaching with such tools becomes more valuable to other language learning professionals and institutions.*

*In this paper we will report on a study of data collected from 18 tutors after spending a year teaching a new beginners' course online. We will examine their perceptions of the audio-graphic tool and challenge some of the results from the initial research into audio-graphic conferencing. Most tutors found the teaching experience very positive and liked using the tool; however some experienced technical problems and believe that these affect the learning experience. In addition we will report on the first and successful use of the environment for assessment purposes.*

**T**he role of the computer in computer-mediated communication (CMC) has evolved from being a source of language input, or one part of the communication chain (human-computer interaction), to being the medium through



which learners communicate (human-to-human interaction via the computer). CMC is now viewed as “communication that takes place between human beings via the instrumentality of computers” (Herring, 1996, p. 1). Synchronous CMC (SCMC) was first limited to text, but since the mid 1990s audio conferencing has been commonly available, first through dedicated software, later more commonly available through free applications such as *Net-Meeting*, *Yahoo!*, or *Windows Messenger*.

Audio conferencing systems today can feature images, whiteboards, text editors, text chat facilities and/or web browsers that can improve communication and interaction. Audio-graphic conferencing has thus developed into multi-modal tools (including visual, verbal and written elements). In the field of CALL, audio-graphic conferencing provides learners with opportunities to interact in the target language with other learners or with native speakers. The audio-graphic software provides a collaborative learning environment where a relationship can develop between learner/learner or tutor/learner within the principles of social constructivism. Audio-graphic SCMC “is an ideal medium for collaborative learning through social interaction both with tutors and with peers” (Hampel & Hauck, 2004, p. 68). In the case of Open and Distance Learning (ODL), audio-graphic conferencing can help in “removing the distance from distance learning” (Kötter & Shield, 2000, p. 16). However, mediated interaction through audio-graphics raises issues such as the inclusion of contextual information, the narrowing of the range of symbolic cues, and the increased possibility of ambiguity (Erben, 1999); also, the management process during online tutorials is characterised by disruption and discontinuity (Ibid).

*Audio-graphic conferencing systems have been adopted as language learning tools mainly by ODL providers, such as OnLive Traveller, used by Högskolan Dalarna University in Sweden, or Lyceum, the UK Open University's audio-graphic tool. One key issue in the research into the audio-graphic environments is to research what the tutors' experiences of the tools are, which is a key element in the CALL research agenda (Warschauer, 1997) as “the teacher's point of view provides us with another vital perspective (...) and it is a view that must be carefully acknowledged if CALL is to be successful” (Debski & Levy, 1999, p. 10). The importance of the tutor in audio-graphics has been acknowledged from the earlier research: “a key figure to the success of the whole project was the tutor” (Kötter, Rodine, & Shield, 1999, p. 4 of printed document) to the later, such as the case of a study of online tuition using OnLive Traveller where a success factor was “the close relationship which is created between the teachers and the students” (Eklund-Braconi, 2004). There is a call for research into the human side of teaching with audio-graphics as well as the software if best practice is to be identified and shared: “This can be achieved by conducting research into tutor attitudes and teaching styles, tutors' use of the online media and tutors' awareness of the different interaction patterns of online and face-to-face communication – to name but a few of the areas where further investigation would benefit the development of best practice in online tuition” (Hampel & Stickler, 2005, p. 323).*

One common criticism of research into audio-graphic tools is that many are exclusive to the institutions that use them and therefore, although that research is of interest to the wider research and teaching community, its applicable value seems quite limited. This paper will focus on one specific tool (*Lyceum*) at one specific institution (The UK Open University) but the university intends to phase out *Lyceum* in favour of a new Moodle-based

open-content audio-graphic synchronous conferencing tool, which should be available in 2008. Whether this new software will have the same characteristics or provide the same affordances is too early to tell, although the lessons learnt from experience and research will actively inform the design of the new tool. With this development, the insight into teaching with such tools becomes more valuable to other language learning professionals and institutions.

## The audio-graphic tutor's perspective

The decision to use a particular piece of software in Higher Education institutions can depend on an individual tutor, department, or it can be a University policy. For example, Open University tutors and students are given the audio-graphic software *Lyceum* and no other alternative is available to them. In their modal considerations for CMC, Levy and Stockwell (2006, p. 96-97) state that "the choice of media used for the communication has the potential to affect the message in the amount of time it takes to be sent and received, the relationships between the participants in the communication, the types of language used in the message, the types of equipment necessary in order to conduct the communication, and even the preferences of the individuals involved." Greenberg (2003) states that the success of the software is dependent on the positive attitude of tutors. Tutors can offer a unique perspective on a learning environment, and this should be valued and researched: "The teacher's point of view provides us with another vital perspective (...) and it is a view that must be carefully acknowledged if CALL is to be successful". (Debski & Levy, 1999, p. 10). Hence, perceptions are essential: if tutors find it useful, easy to use and "believe" in it, they will convey it to their students (and if they do not, it is likely that they will convey that too).

Some studies into the beliefs of tutors using the audio-graphic software *Lyceum* have been carried out at The Open University, including those by Hampel, Greenberg, and Coleman, as described below.

In 2002, Hampel and Hauck (2004) evaluated the experience of 15 tutors teaching the first-ever OU language course (German upper-intermediate) to use audio-graphic conferencing. The feedback from the tutors included some information on their perspective of teaching with the software. Their main concern was the technical (mostly relating to ISPs and connections) and sound quality problems they experienced, and most of the tutors agreed that these technical issues affected the online learning experience. Another concern was the demands on their time, and the effort required to make the online activities work. But still, most tutors had a positive experience and as they familiarised themselves with the software, they were better equipped to cater to student needs.

In another study, Hampel (2003) examined the experience of six tutors teaching with the same software in an advanced German course. As well as the technical problems mentioned above, the tutors' main concern was the lack of body language, which the tutors said made the environment less spontaneous, leading to awkward silences and making participation more difficult. However, the overall experience was positive and the majority of the tutors agreed that, in spite of their concerns, using the audio-graphic software had improved the students' oral communication skills. Tutors claimed that their students had found the experience stimulating and it had increased motivation as well as encouraging them to take

more control over their own learning situation. The multimodal environment impressed the tutors, who saw potential for it to address different learning styles.

In contrast, Greenberg (2003) claimed that the majority of tutors who used the same audio-graphic software were not positive about repeating the experience. These contrasting views need further research to seek clarification.

Coleman (2003) surveyed the majority of the tutors who were about to start teaching *Portales*, the beginners' Spanish distance learning course our study focuses on. Of the 59 replies he obtained, 23 were from tutors who taught the online version of the course. Being the first year that the course ran, and the first time that audio-graphic conferencing was used for a Spanish course, none of the tutors had any experience of teaching with the software, although they had been briefed and had received training. The results for the 23 online tutors are below:

**Table 2. Spanish online tutor beliefs (adapted from Coleman, 2003)**

	<b>Strongly agree</b>	<b>Agree</b>	<b>Neither agree nor disagree</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Online tutorials can offer the same learning potential as face-to-face	3 (13%)	10 (43%)	7 (30%)	3 (13%)	0
Effective language learning requires face-to-face contact	1 (4%)	6 (26%)	3 (13%)	10 (43%)	3 (13%)
Lyceum offers a great opportunity to students who cannot participate in face-to-face tutorials	15 (65%)	6 (26%)	2 (9%)	0	0
I don't think the same group dynamic can be created online as when students are together in the same room	0	12 (52%)	3 (13%)	6 (26%)	2 (9%)
I expect online tutorials to become increasingly popular with students	8 (35%)	14 (61%)	1 (4%)	0	0
It's unfair to expect students to cope with new technology and a new language at the same time	2 (9%)	4 (17%)	1 (4%)	12 (52%)	4 (17%)

Although the majority of tutors believed that the audio-graphic software was a great alternative to face-to-face, this was only for those students who could not rather than chose not to attend face-to-face tutorials. Ninety-six percent also thought that online tuition would become more popular, but in the full study, which included the results of the face-to-face tutors and also the German tutors, Coleman found that “the more tutors know of the OU and of *Lyceum*, the less they predict that online tuition will prove popular” (2003, p. 4). Twenty-eight percent considered it unfair to expect students to cope with the technology at the same time as learning a new language. At the beginning of the course, 43% of tutors were either waiting to decide or were sceptical about the potential of the online environment. More than half the tutors did not think that the same group dynamics could be created online as in face-to-face, and 30% believed that effective language learning requires face-to-face contact. The overall picture was very mixed, and suggested that although some tutors had chosen to teach the online version of the course, they had reservations about the online environment. Potentially, this could be damaging to an online course, as it is the tutors who can convey and show enthusiasm for the possibilities of the medium to the students.

## The study

To ascertain what the impressions of teaching with the audio-graphic software in the case of a beginners' course, and whether the negative experiences and problems reported in the literature still applied after upgrades to the software in the years after the original studies were undertaken, this study was set up. In the next section we will present the context of a study of data collected from 18 tutors after spending a year teaching a new beginners' course online. We will then examine their perceptions of the audio-graphic tool.

## Context: course and software

To help fully understand the context of the impressions reported in this study, details of the course and the audio-graphic SCMC software used are presented below.

### The course

The tutors who took part in this study teach *Portales*, the Open University beginners' Spanish distance course. The course aims to teach the language necessary to help students with practical situations such as visiting, living and working in, as well as many aspects of the cultures of Spanish-speaking areas. The philosophy of the course is “language learning through use”, with focus on interaction. Learning is organised in bite-sized chunks, with gradual development of vocabulary and grammar and explicitly teaches study and language learning skills.

The materials consist of 6 books and 6 audio CDs, study guides, and assessment materials. In addition, students have access to a course website, where they have access to electronic versions of many of the course materials, such as the main teaching and assessment books on e-book PDF format, or the audio files for the listening component of their assessment, as well as the course calendar, online resources and an asynchronous text CMC conference.

*Portales* requires around 300 hours of study. Two versions of the course are available to students, with two different course codes: LI94 and LZXI94. Both courses are exactly the same but for the medium for tutorials and oral assessment. For LI94 students tutorials and the end of course oral assessment are face-to-face, whereas LZXI94 students use audio-graphic conferencing instead. Tutorial time is 21 hours. These tutorials, which are not compulsory to complete the course, offer opportunities for interaction among students, which is considered by many the main challenge to the provision of distance language learning. As such, the linguistic focus during tutorials is usually on fluency over accuracy. In the first year the course was offered (2003-2004), 1694 students signed up for LI94 and 536 for LZXI94. 26 tutors taught the online strand, with a ratio of between 15-20 students per tutor (although many tutors chose to teach more than one tutor group).

As the course was in its first year of presentation and this was the first time a Spanish course offered online tuition, the online tutors had experience as distance language teachers in the face-to-face mode but had no experience of teaching using audio-graphic conferencing when they started tutoring. Because of the technical, pedagogical, and time challenges of the new medium, online tutors were provided with sets of materials which they could choose to use for their tutorials. The activities were written within a constructivist approach with communication as a main goal, based on theories from cognitive and interactionist SLA but taking into consideration sociocultural theories of performance in addition to the psycholinguistic approach (Rosell-Aguilar, 2005). Tutors had the freedom to use the materials provided as they are, modify them, or not use them at all. In any case, they managed their tutorials according to their teaching style and the group of learners in their tutorial group, hence making the learning experience different in each case.

As mentioned above, teaching with audio-graphic software places new demands on the tutor, who has to learn how to use the software and how to adapt their teaching style to the audio-graphic environment. All users are prompted to go through an automated tutorial when they install the software, and the university provides a dedicated helpdesk for any technical problems. In addition, tutors receive three training sessions before the course starts. The first session focuses on technical training on the main features of the software. The second session focuses on pedagogical training, including how to promote peer work, community building, and strategies for inclusion of all students. During the third session, tutors are asked to prepare an activity (using the teaching materials provided) and do simulations with other tutors posing as students. A fourth and final training session takes place before the end of course assessment, to ensure tutors are familiar with the format, the marking criteria, how to use the recording facility and send the audio files to the examinations office.

### ***The software and its challenges***

The audio-graphic software used for language courses at The Open University is an in-house developed software called *Lyceum*. It allows multiple users to meet online for plenary or small group work and includes synchronous audio conferencing, whiteboards, a text editor, text chat, and a voting facility among other tools. When students log on to the environment, they enter a lobby and from there they can access the different rooms available (see figure 1, the *Lyceum* Lobby). The software is available to all Open University students and

many use it beyond tutorial time to meet socially or form study and revision groups, hence making the most of the affordances of the tool as a medium that allows them to collaborate and take responsibility for their own learning. A taster website is available ([www.open.ac.uk/Lyceum-taster](http://www.open.ac.uk/Lyceum-taster)).

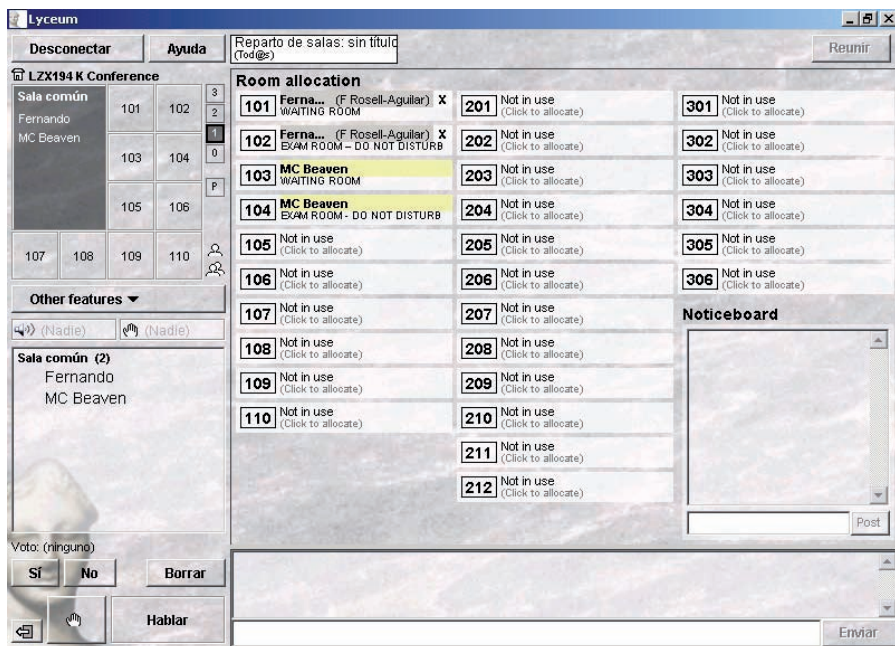


Figure 1. The *Lyceum* lobby.

As users access the software, they arrive at the lobby, where they can see who else is in the rooms and what bookings have been made. On the bottom left hand side corner we can see the buttons for the functionalities that users have available (talk, raise hand, indicate absence, vote yes or no, and wipe) as well as the list of users online.

The use of this conferencing software has been documented at different stages, from the pilot projects (Hauck & Haezwindt, 1999; Shield 2000; Kötter, 2001; Hewer & Shield, 2001), to reports on its use once adopted by the university in 2002 (Hampel, 2003; Hampel & Hauck, 2004). The software was regarded as the ideal tool available to provide opportunities for interaction in L2 and to provide frequent and instant feedback (Hewer, 2001). The fact that it is available anytime from anywhere with an Internet connection means that it is more accessible to both tutors and students, who traditionally had to travel to a regional centre for tutorials or rely on telephone tuition. There have been debates about the pros and cons of the medium and its potential for learning both inside and outside the university, and many reports and theories about previous experiences. These included the benefits and challenges, which included technical issues such as sound quality and weak connec-

tions, and the type of tasks designed for the medium. In addition, anecdotal evidence from training sessions, conversations and email exchanges with tutors and students, message-board contributions, plus reports from staff tutors, had identified two further issues about the learning environment: it was described as a cold medium, and the interaction patterns considered slow, which suggest that it is not an ideal environment for interaction.

Another issue that raised concern was the suitability of using audio-graphic conferencing at beginner level. There are opinions that synchronous audio conferencing is best suited to "learners of at least intermediate competence in the target language" (Kötter, 2001, p. 347) and that "synchronous CMC places a higher cognitive load on the learner, and as such is better suited to higher proficiency learners" (Skehan, 1998, in Levy & Stockwell, 2006). It was also for this reason that the suggested tutorial materials for tutors were created, reinforced by the expertise of the Open University Institute for Educational technology, who warned that in the audio-graphic environment "activities for beginners need to be highly structured with explicit instructions" (Price, 2002).

Finally, one of the main drivers for this particular study was the receipt by the researcher of an account of a first tutorial by one of the tutors who had just begun teaching using the audio-graphic software. She is a very experienced OU language tutor who had completed all the training given and was looking forward to teaching in the new environment. In her email, she described the tutorial as "a disaster" and recounted how her first tutorial was marred by technical problems which included loss of sound and students getting disconnected for no apparent reason. Even she was disconnected a few times for a few minutes each time. She described her feelings of frustration and being "a bit down" about the experience after she had thoroughly prepared for the tutorial. She also wrote that she was worried about her students, whom she described as "anxious" in the face of these problems, but she had managed to reassure them by telling them this was a one-off and that in the previous online sessions she had attended (her training sessions) no such problems had occurred. She writes "If these technical problems persist it is going to be quite difficult to make good use of our tutorial time". However she finished by describing herself as an optimist and hoping "that these were just teething problems and all will be good in a few weeks' time". Was this an isolated case or was something similar happening in other tutorials? If this experience was not that of a single tutor, but commonplace, what were the implications for the online version of the course? Despite the development strategy, materials development, training for students and tutors, if the tool was not robust enough, what kind of tutorial support was the University offering the hundreds of students who had signed up for the online version of the course?

### ***Methodology***

All 26 tutors who taught the online strand of the course were sent a questionnaire which asked about their impressions of teaching with the audio-graphic software at the end of the first year of presentation of the course. The questionnaire aimed to obtain information on what the experience of providing tutorial support though the SCMC software was like: the tutors' reasons for choosing to teach the online tuition strand of the course and whether they would be teaching with it again, their general opinion of the tool, and in particular their opinion of it for language learning and for assessment purposes; if they would make any

changes to the software, whether they had experienced technical problems and their effect on the tutorials, and what the atmosphere was like during tutorials. 18 questionnaires (69%) were returned. The data has been approached quantitatively and the results are presented below.

### ***Results: Tutor impressions of teaching with the audio-graphic software***

The tutors were asked about their reasons for choosing to teach the online version of the course. Fourteen tutors (78%) state that they chose to do it to get a new experience in audio conferencing and expand their skills. Six also mention the convenience of not having to travel to a regional centre to teach. One had no choice as she teaches from Spain and her students are based all over Europe, but indicates that she would have chosen it anyway as it presents a challenge and offers new possibilities.

The tutor training provided appears to be effective as all tutors feel confident using the software, feel they can use the modules (whiteboard, grid, document, text chat), and feel they can use the tools (pin, moving boxes, writing, pictures...) by the end of the course. In addition, all except one think they know what most of the menus, icons and buttons do. However, one tutor does say "Perhaps I would provide more training for tutors before going live, to anticipate difficulties or be better prepared to deal with the particularities of *Lyceum*."

The tutors' impressions of using the audio-graphic software were mostly positive (with the exception of one tutor, who found it a terrible experience). This is in line with the findings of Hampel in her various studies. The main findings are presented here in the following categories:

- General opinion of the tool
- Technical problems
- Evaluation as a language learning tool
- Changes to the software
- Assessment
- The atmosphere in the environment
- Returning to audio-graphic tutoring

### ***General opinion of the tool***

Sixteen tutors (89%) say they like using the audio-graphic software. Of the two who do not like it, one is the tutor with the very negative experience, who just says she "hates it", and the other says that "although it is a great tool and very well designed, I miss/need the visual interaction with my students. I didn't feel as motivated as I do in a face to face class."

When asked what they found particularly enjoyable about the tutorials, eight tutors (44%) mentioned communicating with the students; others mentioned the medium itself, being able to work from home rather than travelling, the flexibility afforded by the software, the tools available, and the fact that it was fun. One comment which summarises the potential of the tool for language learning was that what makes the tutorials enjoyable



is "the ability to change pairs easily (no moving about a classroom carrying papers), the frequency of tutorials, the comfort of the medium, working with attractive graphics...lots!"; another tutor says "Because the contact is 'direct', even if it is not face-to-face: there is the voice, the real-time co-presence, the immediate feedback and the group aspect", she adds: "It is fun to find ourselves in the comfort of our own homes and for me it is thrilling to think that all this is possible with people thousands of miles away or house-bound. The possibilities offered by *Lyceum* in this aspect are fantastic and I am proud of taking part in this kind of learning experience".

In contrast, when asked what they found particularly difficult about the tutorials, seven tutors (39%) mention technical problems such as the audio breaking up or the instances when they get disconnected. One of the tutors, however, thinks that "unless they are recurrent, students cope well with them [the technical problems] and learn ways to get around them". Four tutors mention low student attendance, and another four the lack of visual contact. Low attendance and some reluctance to participate apply to OU language tutorials in general and are commonplace in telephone tuition. Two tutors found having to explain not only the instructions to the activities, but also the technical instructions were too time-consuming. And one tutor mentions silences when people are reluctant to participate. The tutor with the very negative experience states that "Nothing [is] difficult as such, but *Lyceum* is the most in-designed [sic] and ineffective teaching medium ever!"

### ***Technical problems***

Sixteen tutors (89%) experienced some sort of technical problem while using the software, mostly getting temporarily disconnected and some sound problems. This is consistent with the experience reported by previous research: Hampel (2003) had found that 66.7% of the tutors in her sample believed that technical problems had had a negative effect on the learning experience. Similarly, thirteen tutors (72%) think that encountering technical problems had a negative impact on their students' learning, three years after Hampel's study. Two tutors do not think technical problems had a negative effect and a further two did not reply. Three thought that technical problems may have been the reason for decreasing attendance and five consider it distressing and demoralising. This question is perhaps a little too broad as some tutors comment on the fact that some students could not get the software to run or work properly at all, which probably has more to do with computers that do not meet the minimum specification and less with the software. One of the tutors who does not think technical problems had a negative impact says that she developed some strategies "for them to keep working while I sort out my problems" and another says that herself and her students learnt to live with them: "the students assume that some technical problems may arise and soon learn strategies to minimise the impact". She adds that "The tutor's attitude and resources are very important here".

### ***Evaluation as a language learning tool***

Despite the technical problems, 15 tutors (83%) felt that their students got enough opportunities to practice their speaking skills and also that the students made the most of those opportunities. The tutor with the very negative experience says that "some did and some didn't" and the remaining two tutors felt that their students did not get enough opportuni-

ties. This is once again consistent with previous research, where 83% of tutors agreed that using the software had improved their students' oral communication skills. One tutor qualifies this by saying that although they did not speak as much as she would have liked, this is what can be expected of the type of student at beginner level and adds that "the quality and management of speaking opportunities are related to the work of the tutor" rather than the software. Another tutor sometimes got the impression that when speaking, the students relied on printed materials they might have with them.

When asked what they consider to be the most and least helpful aspects of using the software for language learning, tutors list among the most helpful aspects the fact that it allows students who otherwise would not have access to tutorials to attend (5), learning from home (3), access to fellow students online for self-help groups (2), flexibility (2), no visual prejudices, interaction, reliance, communication, multimodality. One tutor says that "*Lyceum* is very user-friendly. Even students who feel they are not very technically or computer trained soon get to know the system, have no problems and in fact, this is an added boost of confidence for them". She thinks that students are more confident and willing to take risks as they can "hide" in the anonymity of the medium; she also enjoys the richness that having students in different places brings to the tutorials, which she says "can be used effectively to produce "real" conversations". For example, asking about the weather or what people are wearing is a much more meaningful activity when students are apart from one another than face-to-face. Another tutor says: "I think the best thing about *Lyceum* is the contact students have with each other, both speaking Spanish and as a support network". At both ends of the spectrum, whilst one tutor says "As a tutor I could simultaneously write and speak. I found that helped students" and another "It's just like a real class face-to-face", the tutor with the very negative experience, in contrast, states that there is "absolutely nothing" helpful about the software.

With regards to the least helpful aspects, the majority of tutors mention lack of body language and visual clues (10), and technical or sound problems (4). These were the also main concerns that Hampel had found in her 2002 study. Other issues listed are audio quality, the lack of compatibility between *Lyceum* and other applications, which prevents them from using materials from other sources, the fact that activities take longer than face to face, which one tutor says is "not [a] natural way of interacting", and the fact that communication can be slow, which is explored later. Perhaps one comment that summarises the general feeling is "The lack of visual interaction and the turn taking to speak made the tutorials a bit unnatural, not as dynamic as face to face ones. I use a lot of gestures and mimic at beginners level and found myself using English a lot more than I would in a face to face situation." Once again, an issue that arises is the role of the tutor: "it depends tremendously on the tutor: his/her confidence in the medium, his/her preparation, (...) and his/her management, so if this fails..."

### **Changes to the software**

Nine tutors (50%) said they would not change anything in *Lyceum*. Among their replies they say: "I am really enjoying it" and "I cannot think of any changes that would make it better", and one tutor wishes a web browser was available. The other 50% say they would make changes. Among these the most wanted are changes that would improve communica-

tion, such as being able to see faces (3), and also technical issues such as compatibility with Microsoft Word (2), making the list of students attending be in the same order for all users (2), or a “lock to talk” button for tutors.

### **Assessment**

This was the first time The Open University had used *Lyceum* for assessment purposes, and tutors were asked to do the oral component by having a one-to-one encounter with each student (as they would in the face-to-face version of the course). The encounter consisted of two sections: in the first one students had to complete an exchange of information with the tutor on a series of given topics (description of family, routine, holidays, future plans...) and in the second section they took part in a role-play to book a holiday. All eighteen tutors carried out the oral component of the course assessment via *Lyceum*, recorded it using the recording tool that is available in the software, and submitted the recordings online to the exams office. The experience of using the software for assessment purposes was positive for all of them. Even the tutor who had a very negative experience considered it “fractionally less lousy than usual”. Although four complained that the process was more time consuming than in the face-to-face equivalent, they considered it coherent to assess in the same medium where the teaching took place.

### **The atmosphere in the environment**

We reported above how *Lyceum* has been described as a cold environment. When asked whether they agree with this description, seven (39%) agree, and eleven (61%) disagree. Among the six that consider it cold, two state that it is cold at first, but there are ways of creating a warmer environment (a comment shared by some of the tutors who do not agree that the medium is cold), and another two mention once again the lack of para-linguistic clues. The tutor with the very negative experience states that *Lyceum* is “Cold, unfriendly, ineffective”. Those who do not agree that it is a cold medium agree that it can be cold at first but they got to know their students: “It is colder than face-to-face, but not freezing. You can still have a laugh” and “I think when you are an experienced online tutor you can overcome this type of thing through use of emoticons, humour, feedback, text, chat, photos”. So the reported coldness of the medium may not be quite as big an issue as had been hypothesised. In fact, 17 out of the 18 feel at ease with their students and that they got to know their students (although four of them do qualify that not as well as they would face-to-face).

Interaction patterns in the online environment had been described as slow. Fifteen tutors (83%) agree that communication via *Lyceum* can be quite slow, two (11%) disagree and one both agrees and disagrees. Some of the delay in communication is blamed on the technical (as with slow connections there can be a time delay), others blame it on the medium itself and the fact that a button needs to be pressed to speak (similar to what Levy & Stockwell, 2006, refer to as “delayed synchronous” in reference to text chat programs) and people cannot speak all at once, which “loses spontaneity”. Silences are reported to seem longer in the online environment, but many teachers might agree that silences are common in a beginners’ tutorial, so perhaps the key here is that the silences “seem” longer rather than actually being so.

### **Returning to audio-graphic tutoring**

Finally, the tutors were asked if they would continue teaching the strand of the course with online tuition and why. Three tutors say that they will not continue teaching it. One is leaving the OU and says "I think *Lyceum* and similar conferencing system should be the future format of learners at OU and other Universities. It was a great experience to work with it. Thanks." Among the other two, one had 2 tutorial groups (one face-to-face, one online) and because of time pressures she is dropping one. She has chosen to drop the online group because "I enjoy face to face tutorials more than *Lyceum* ones". Unsurprisingly, the tutor who had the most negative experience has decided to stop teaching with *Lyceum*: "It's a horrible product and needs serious redesigning". In contrast with those three, and with the claim by Greenberg that tutors are not positive about repeating the experience of teaching online, fifteen tutors (83%) state that they will continue teaching the strand of the course with online tuition. They find it enjoyable, convenient, and they have built up their confidence as online tutors, as can be extracted from the following comments: "I enjoy it and my students seem to as well (I hope)", "I don't have to travel to tutorials! Well, and for the challenge as well", "I feel more confident this year and better able to support my learners", "I enjoy online teaching and it is very flexible", "It's real and easy and very convenient!", "Because I feel it has real potential - I am delighted this year that both my LZX194 groups are meeting in *Lyceum* between tutorials", and "although as a tutor I enjoy more the classroom environment and direct contact, *Lyceum* is different and helps me develop differently", "I believe in the system, I think it offers a great opportunity to students who could not otherwise have tutorials, and I think it is effective. Also, I think I am a good *Lyceum* tutor and am able to provide rich and effective learning experiences to my students through this medium", and finally one tutor says that teaching with the audio-graphic software is "the best thing that's ever happened to my teaching career". For these tutors, the online teaching experience has clearly lived up to their motivation for signing up to teach the online version of the course in the first place: they have risen to the challenge and feel positive about it.

### **Conclusion**

In this paper we have presented the data collected with regards to perceptions of teaching with an audio-graphic tool and we have found very positive perceptions of the audio-graphic software and to teaching with it, which is consistent with previous research by Hampel *et al* and contradicts the claim by Greenberg that tutors were not positive about repeating the experience: overall, tutors say they think they can use it, enjoy using it, feel it provides good opportunities to practice speaking skills, and most are keen to keep using it. It appears that using it has also been a more positive experience than the tutors themselves had foreseen and shows a positive shift from the scepticism expressed in Coleman's survey. Although the question was not asked directly, these results seem more optimistic than his claim that tutors are less positive about the audio-graphic software the more they know about it and the Open University. This shift in attitudes can be interpreted to mean that the actual experience is positive enough to change their minds about their previous reservations. Communication with the tool is still considered slow and although some believe the environment can be cold at first, most do not agree that the environment itself is cold. Tutors also believe that the software provides access to a tutor and peers for learners who

otherwise would not be able to attend tutorials and all had a positive experience doing assessment via the audio-graphic conferencing software.

However, many suffered technical problems and believe these had a negative effect on their students' learning, and miss paralinguistic clues and body language. The key issue is the management of tutor and student expectations: it seems logical that if tutors convey to their students that there is bound to be some varying sound quality and that someone might get disconnected from time to time, but that this should not affect performance and students can simply reconnect, then the students would probably accept these as part of the nature of audio-graphic conferencing. Also, what some students or tutors may qualify as "technical problems" is to others "a few glitches" or "varying sound quality". The problem in expectations is that institutions, logically, do not publicise any technical problems the students might suffer. These may not be insurmountable in most cases: technical problems have been and continue to be addressed by the software development team, and the system is now very robust; reported technical problems tend to be more related to the use of computers which do not meet the minimum requirements to run the software, and there is a helpdesk available to staff and students. The issue here also has technical and equal opportunities ramifications: the University has a policy to support all students, and these sometimes sign up for the course even though their equipment does not meet the minimum specification that is detailed to them during the registration process. Also part of this commitment is the fact that the software has been made to allow students with low bandwidth connections to connect and enjoy the same features as students with better connections, which has an effect on the overall sound quality for the whole group.

With regards to the tutor who sent an account of a disastrous first tutorial, she persevered with teaching online and by the time of this study at the end of the course she was one of the most positive about the experience of using the audio-graphic software. With a positive attitude, practice, and the help of the helpdesk she and her students were able to get around the technical problems they suffered. As a follow-up to the study after reading her questionnaire, the tutor who had such a negative experience was contacted and asked to recall her first tutorial. She had also experienced the same type of technical problems as the first tutor, and also referred to hoping that the experience would be just "teething problems". However her problems continued and she, who looks forward to her face-to-face tutorials, began to fill with "a sense of dread" about her online tutorials and they became "a chore, not a pleasure". These two similar initial accounts and how they led to such different experiences by the end of the course, as well as some of the comments reported above, reflect how much the success of the provision of tutorial support depends both on the individual tutor's approach and teaching style, and their attitude towards the environment. How this reflected on their respective groups of students and whether it had an effect on their learning experience would have made very interesting research, but unfortunately the data is not available.

One last issue regarding this project in particular is that the course was in its first year of presentation. It is foreseeable that the more experience and expertise with the audio-graphic software the tutors gain - even taking into consideration the decrease in novelty of the medium and the effect that may have on the tutors' attitude and perception of using it as a challenge and something exciting - the more the tutors will learn to know what to expect from the tool, its benefits and its limitations, and therefore use it in a manner which

suits their needs and most importantly those of their students. Presumably this will include the adaptation of materials that they have used in the past in the face to face environment to the audio-graphic one and/or the development of new materials that suit their individual teaching styles. Both of these we presume will be informed by their teaching experience and therefore will take into consideration the affordances and limitations of the software.

The advent of the new open-content Moodle-based audio-graphic conferencing software at the Open University will allow its use by individuals and institutions beyond the Open University and it is hoped that this will open the doors to a new wave of research into modes of tuition, delivery strategy, task design for the new medium, tutor and learner attitudes, roles and skills in audio-graphic conferencing in the field of Open and Distance Learning.

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# Collaborative early EFL reading among distributed learners: A simulation pilot study

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*It is widely accepted that reading provides important opportunities for second language (L2) development, however, in Taiwan sources of L2 input are often limited for learners in English as a Foreign Language (EFL) settings. This problem is compounded by environmental constraints such as students' diversity in reading abilities, the socio-economic gap between urban and rural students, class sizes, time constraints and available resources, and dealing with these constraints effectively requires new pedagogies and tools. We designed a wireless peer-assisted leaning system for early EFL reading to enhance online collaborative EFL reading and provide EFL learners with an opportunity to teach and learn with each other. In this study we examine the use of this wireless reading system in a conventional EFL class to simulate a distributed learning situation. The results suggested that wireless EFL reading may emerge as a flexible and portable solution to the pedagogical challenges that exist in conventional EFL reading and teaching environments.*

Students' reading abilities play an important role in their academic achievement, and a student with higher reading abilities will usually perform better than peers whose reading abilities are not as well developed. In addition, because of a growing recognition that reading provides important opportunities for second language (L2) development in second language learners (Day & Bamford, 1998), especially for learners in English as a foreign language (EFL) settings where sources of L2 input are limited (Gehard, 1996), teaching of English reading has been drawing increased attention from teachers of EFL.



Numerous researchers argue that providing children with an intense intervention program can effectively prevent children from encountering reading difficulties (Clay, 1993; Foorman & Torgesen, 2001; Hiebert, Colt, Catto, & Gury, 1992; Slavin, Madden, Karweit, Dolan, & Wasik, 1992; Taylor, Frye, Short, & Shearer, 1992). Both collaborative learning and scaffolding are widely used strategies to increase intensity and benefit English reading instruction and reading achievement of EFL learners.

Collaborative learning (CL) is a learning approach in which students teach and learn with each other (Ravenscroft, Buckless, & Hassall, 1999) and all work together to accomplish a common goal (Johnson & Johnson, 1994). CL can be implemented in three basic forms: **tutoring** (peer or crossage), in which one student teaches another; *pairs*, in which students work and learn with each other; and *small groups*, where small numbers of students teach and learn together. According to Slavin (1989), CL methods are considerably more effective than traditional methods in increasing basic achievement outcomes, including performance on standardized tests of reading and language arts, mathematics, social studies, and science. Ushioda (1996) suggests that CL can promote students' learning motivation and satisfaction. Ghaith (2003) argues that students' EFL reading achievement and academic self-esteem improve and that feelings of school alienation decrease in CL learning situations.

Regarding scaffolding used in reading intervention, a number of studies have commented positively on the efficiency of peer-assisted learning strategies (Fuchs, Fuchs, Mathes, & Simmons, 1997; Jacobs & Gallo, 2002; Mathes, Torgesen, & Allor, 2001). Peer-assisted learning occurs in four main varieties: peer tutoring, cooperative learning, peer collaboration, and peer modeling. Based on a study by Hartup (1992), children teaching each other is generally effective as a cognitive activity. Similarly, Greenwood and his colleagues has also reported that the ClassWide Peer Tutoring model they used increased the degree of improvement in learning outcomes in reading (see Greenwood, 1996).

However, just heterogeneously placing students in a group and assigning them a common goal does not guarantee that students will become involved in effective CL activities. Furthermore, even though students with higher reading abilities are able to provide their peers with learning support, there are some weaknesses that need to be overcome, such as postponed support, invisible helper, and a failure to provide feedback (Lan, 2006). Actually, because of pedagogical challenges such as students' diversity in reading abilities, the socio-economic gap between urban and rural students, class sizes, time constraints and available resources, CL and scaffolding are not as easily implemented in Asia's EFL settings as in that of the Western countries (Lan, Chang, & Sung, 2006). For example, at elementary level in Taiwan, there are about 30 students with diverse reading abilities in an EFL class. Some of them are able to read individually, yet some of them are unable to recognize the common sight words or to decode and encode a new word. There is only one EFL teacher to take charge all of the teaching and classroom management tasks. The teaching time is only 2 forty-minute classes a week. Furthermore, the resources available to the EFL teachers or learners differ significantly between urban and rural areas. Some ideas have been proposed to address the reality of teaching in Taiwan stated above, such as cross-age placing or homogeneous ability-placing, but these are seldom successfully implemented in real EFL settings because of the logistical restrictions including school organization, lack of available qualified EFL teachers, and financial limitations.

Obviously, both EFL teachers and learners need adequate support to overcome the above challenges and to promote effective EFL reading teaching and learning. In order to attempt to deal with this problem, we designed a mobile dynamic peer-assisted learning (MDPAL) system to implement CL and peer-assisted learning strategies in a wireless environment. The purpose of MDPAL was to provide EFL learners with an opportunity to teach and learn to perform early EFL reading tasks with online peers. Through connecting distributed learners, MDPAL was expected to decrease the socio-economic gap between town and country, and to provide learners with learning support to engage them in collaborative EFL reading activities anytime, anywhere. In this study, we conducted a pilot study to evaluate the effect of MDPAL in collaborative EFL reading activities. It was implemented in a conventional EFL class and to simulate the online collaborative EFL reading activities were carried out via the Skype audioconferencing software (experimental group). Identical EFL reading activities were also implemented in another class (control group) except without the support of mobile devices. Both the learning-related and learning-unrelated behaviors of EFL learners were observed to build a foundation to further implement MDPAL in a real, distributed EFL learning community.

The MDPAL system is described below, followed by the evaluation and results of the pilot study and finally, the conclusions regarding the system.

## **MDPAL**

MDPAL consists of two modules: a phonological skills training module and a peer assessment module. The phonological skills training module focuses on the learning of phonic rules and common sight words. It provides students with real-time learning support and feedback. The peer assessment module asks students to read a written text. Whenever they have problems in reading the text, they are able to find online support by making an online phone call via the Skype software. The function of each module is explained briefly below.

### ***Phonological skills training module***

This module includes two sub modules: sight words and phonetic words. After students log in to MDPAL, the system first assesses students' reading skills in terms of sight word fluency and phonetic word fluency. If they pass this first test, then they can go straight on to the peer assessment module; if not, then they have to practice the sight words and phonetic words. During the learning processes (practice and test), MDPAL is capable of providing students with real-time feedback and learning support. Examples of the learning activities are shown in Figures 1a and 1b.

### **Peer assessment module**

After students pass the phonological skills training module, they continue doing text reading. In this module, MDPAL keeps an online helper list which includes the names of qualified students who have passed the online peer assessment. The EFL teacher's name is always the first one in the list. An online helper can help online peers do the online peer assessment or text reading.

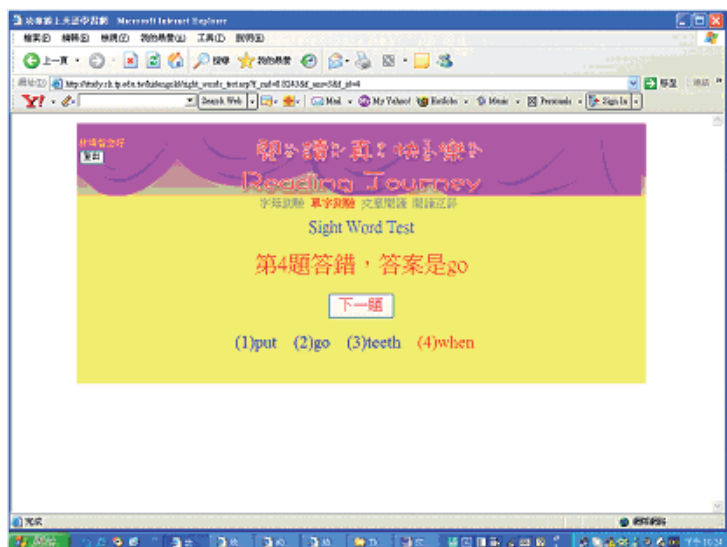


Figure 1a. An example of the phonological skills training: sight word learning activities

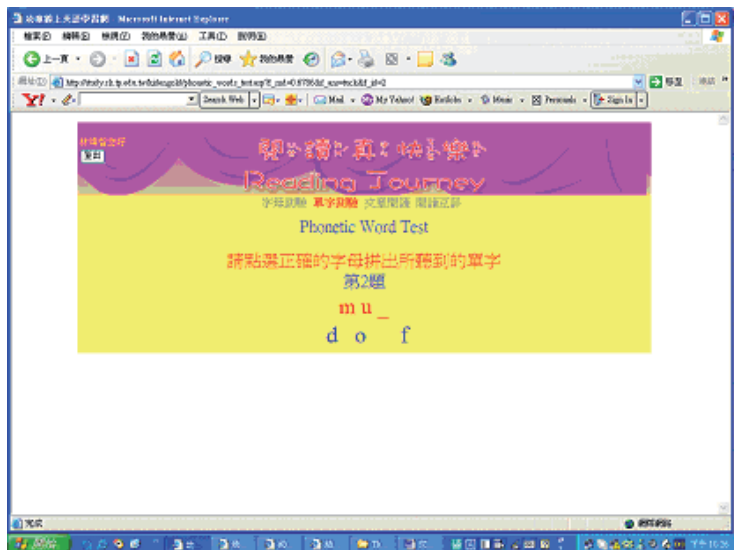


Figure 1b. An example of the phonological skills training: phonetic word learning activities

Generally, after students get into the module, they are asked to read the text individually, whenever they encounter problems in text reading or meaning comprehension, they can ask for help via the Skype software. After they have been able to read the text, they invite two online helpers and then read the text to them. If both of the two online helpers judge the readers as passing the assessment, they can then become a new online helper. If one or both of the two online helpers judge that the student has 'failed', then the student needs to keep practicing reading the text. Figures 2a and 2b shows the learning examples of this module.

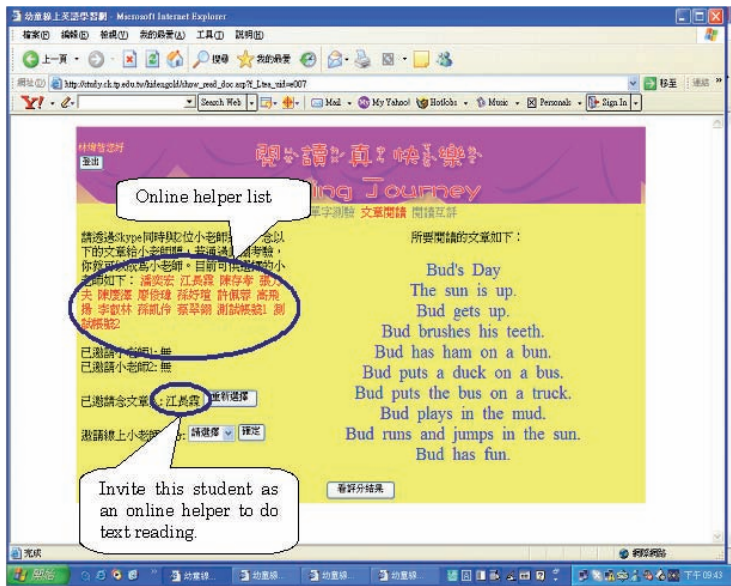


Figure 2a. An example of text reading activities with online support

### System architecture

MDPAL system adopts a three-tier architecture, as shown in Figure 3. The first tier is responsible for users' online practice and testing through a browser. The modules on the web server of the second tier uses database accessing objects to access data from the database server in the third tier. The interactive results between the second and the third tiers will display on the browser in the first tier. All of the modules are adapted to Microsoft's ASP (Active Server Pages) to interact with the forms in the browser on the client and the objects of request and response. Through accessing the database on the server, MDPAL can provide users with the necessary scheme for synchronous practice and testing.

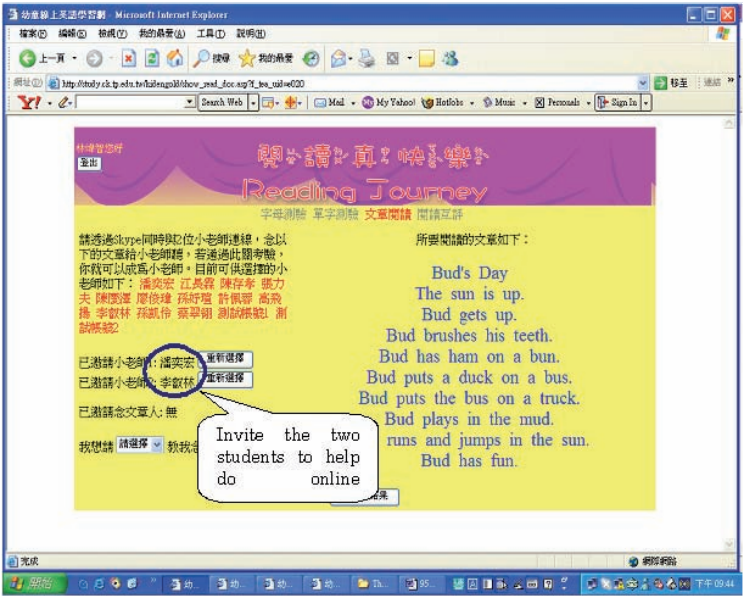


Figure 2b. An example of online peer assessment

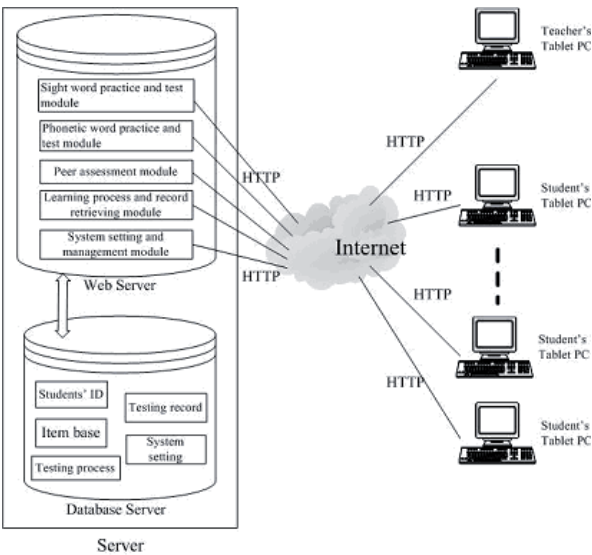


Figure 3. System architecture of MDPAL system.

### ***Early EFL reading materials***

In total, there were five teaching units were used in this study. Each unit contained both of the two components (phonological skill training materials and an oral reading text) described above. The phonics rules plus a set of common sight words made up the phonological skill training module. Based on the content of the phonological component, a carefully tailored written text was used as the oral reading material in the peer assessment module.

## **The Evaluation of MDPAL**

### ***Participants***

The participants of this study were 52 third-grade students in 2 classes (each class had 26 students made up of 14 boys and 12 girls) from an elementary school in Taipei, Taiwan. One class was randomly chosen as the experimental group and the other as the control group. At the beginning, the participants were heterogeneously grouped in small reading groups based on their English achievement in the second grade. The grouping method was as follows. The students whose grade was A were classified as high reading ability students, while those whose grade was B or C were classified as medium reading ability students, and those whose grade was D or Fail were classified as low reading ability students. As a result, the experimental group had 6 high-ability, 11 medium-ability, and 9 low-ability students; and the control group had 7 high-ability, 10 medium-ability, and 9 low-ability students. After heterogeneously grouping students (one student with higher English achievement was coupled with two or three students with lower achievement), both the experimental and control groups had seven reading groups each (five groups with four members and two with three members).

### ***Design***

This study employed a concurrent triangulation approach. Both qualitative and quantitative data were collected concurrently. For qualitative data collection, we used field observation where both audio and video data of the students' collaborative and peer-assisted learning activities were collected in 5 weeks; and for quantitative data collection, we used a quasi-experimental design where all the members of each class (control and experimental) were individually pre-tested and post-tested.

### ***Procedure***

In order to understand EFL students' online peer-assisted reading behavior, we observed children during collaborative EFL reading during 5 two-class activities. In addition to this, because we wanted to simulate a situation in which students read with distributed learners (in a networked community) via the online phone calls, we treated each small reading group as though they were a virtual distributed class. Thus, in the experimental group (with the support of mobile devices), the inter-group reading behavior (peer-assisted reading and peer-assessment) must be done online, yet the intra-group reading behavior without this restriction was observed. On the other hand, in the control group (without the support of

mobile devices), if students had learning problems they were able to ask their group mates (intra-group) or go to other groups to ask for help (inter-group).

In the experimental group, each student was given a TabletPC with a touch stick and a micro-earphone set. In each of the two-class activities, they logged in to MDPAL, and firstly attempted the phonological skills training activities with the support of MDPAL. After passing this level, they then continued with text reading. In addition to the text shown on the screen, they were also given a printed version of this text to easily mark the words they were unable to read. Whenever they had problems in oral reading or meaning comprehending, they could receive help from either their group mates or the online helpers. In addition, it was possible that two or three students dynamically formed a learning group via making an online phone call (by *Skype*) when they did the online peer-assessment activity or the peer-assisted reading. All of the students had the same role, and had an opportunity to be each others' online helper.

In contrast to the experimental group, the students of the control group first of all learned the identical materials as the experimental class (sight words and phonetic words) through direct instruction and whole class tests given by the EFL teacher. Then they were asked to collaboratively read a printed text with their peers. Finally, they were asked to read the text to two peers (peer-assessment). Students who passed the peer-assessment were given a paper crown and their names were printed on the blackboard to announce they were the helpers and everyone could go to them for help or assessment. Similar to the treatment in experimental group, the EFL teacher's was the first name on the helper list.

### ***Data analysis***

For qualitative data, our approach was to watch the videotapes, and to focus on the students' behavior (see Appendix A) and the users' behavior towards other students belonging to different learning groups (the virtual distributed classes). Each identified behavior was re-analyzed and the frequency of each observed behaviors was calculated. For quantitative data, we conducted an analysis of covariance (ANCOVA). The dependent variable was early reading scores and the covariate was the students' scores in EFL in the previous semester.

## **Results & Discussion**

### ***In-class observation***

The EFL reading behavior was categorized as learning-related and learning-unrelated. In addition, the learning-related behavior included three kinds of reading behaviors: individual, inter-group, and intra-group behavior. We counted the frequency of each category of behavior and computed the percentages of the frequency of each observed behavior categories. The results are shown in Table I.

Table I shows that students concentrated more on the EFL reading activities with the support of MDPAL, as indicated by the number of learning-unrelated instances. It also shows that MDPAL benefited students' collaborative reading behavior (both inter- and intra-group), but more particularly the inter-group behaviors. We found that it took the

Table 1. EFL reading behaviors

Group reading behaviors	Class	
	Experimental (%)	Control (%)
Learning-related		
Individual	24.5	23.0
Inter-group	27.2	8.4
Intra-group	34.8	28.9
Learning-unrelated	13.5	39.7

students of the control group more time to wait for intra-group learning help (about 4.6%) than those of the experimental group (about 1.3%) even when the helpers were available for providing support. In contrast, the students of the experimental group liked to ask online helpers for learning support when their group mates were busy.

From the video-data observation, we also found that students preferred face-to-face social interaction (communication, discussion, sharing, interactivity, and coordination). When they did peer-assisted reading activities with the virtual distributed peers via *Skype*, they liked watching their peers. We also found that they preferred online peer-assisted learning, as indicated by the fact that even when making online phone calls was not required, they did so when they collaboratively learned with their group mates.

Through further observation of the video-data, we found that the students of the experimental group demonstrated more collaborative learning behavior (both intra- and inter-group) than those of the control group did when they were asked to read the assigned text (this also can be seen in Table 1). We also found that the students of the control group had more learning-unrelated behaviors when they had reading problems and without real-time learning support. By contrast, the students of the experimental group demonstrated more individual learning instances with the support of MDPAL when they were waiting for help from their group mates or online helpers.

Furthermore, we found that students usually began to perform learning-unrelated behavior in the following circumstances: in the control group, students were getting bored when waiting for help for a long time; in the experimental group, technological restrictions of the devices (having problems in using the touch stick) and that of the wireless network (unable to hear the words' sounds pronounced by MDPAL, as well as being bothered by the noise while talking with online peers).

Early reading abilities

Before and after the treatment, all students were given an individual test on their reading abilities. The alpha level was set at .05 and the results are shown in Table 2.

The test of homogeneity of regression coefficients was not significant ( $F(1,48)= 0.00, p > .05$ ). The result of ANCOVA shows that the effect of group is not significant ( $F(1,48)=$



Table 2. Adjust Means ( $\mu$ ) and standard deviation ( $\sigma$ ) of the pretest and posttest results

	Experimental		Control	
	Pretest	Posttest	Pretest	Posttest
	M	M	M	M
$\mu$	19.3	25.3	20.5	23.5
$\sigma$	8.5	8.3	8.8	9.27

Note. For each group,  $n = 26$ .

0.02,  $p > .05$ ) but the effect of test is significant ( $F(1,50) = 27.55, p < .05$ ). The interaction of group and test is not significant ( $F(1,50) = 3.17, p > .05$ ). The simple main effect analyses indicate that the pretest of the two groups is not significant ( $F(1,49) = 0.35, p > .05$ ), and that of the posttest of the two groups is not significant either ( $F(1,49) = 0.65, p > .05$ ). However, the simple main effect analyses shows that the pre- and post-test of the experimental group is significant ( $F(1,50) = 24.70, p < .05$ ), and that of the control group is also significant ( $F(1,50) = 6.023, p < .05$ ). The results show that the experimental group made a larger improvement than the control group did although students of both groups demonstrated improvement in the scores on this reading test.

Conclusion

The evaluation of MDPAL helped us understand young EFL learners' collaborative reading behaviors in a wireless environment. The results showed that the use of mobile devices in collaborative EFL reading activities opens a new world of possibilities. With the support of MDPAL, students were able to concentrate on learning activities. In addition, they were able to do more effective individual learning activities with the support of mobile devices even when they were waiting for learning support. Also, MDPAL effectively promoted the opportunities of social interactions and peer-assisted learning. Students liked learning with online peers. With the support of MDPAL, students made greater progress in learning to read compared with those who did not use the system. However, technological restrictions of the wireless network and technological characteristics of the devices require further research to overcome the problems to enhance the learning effectiveness in a real distributed community. It should be noted that the present study was only a simulation in that all of the online learning was implemented in a single EFL class. Further understanding about the effects of MDPAL on EFL learners' online collaborative behaviors can only be obtained through practical evidence from a real distributed EFL learning community.

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Appendix A: *In-Class Observation Checklist*

Date:                      Unit:                      Observed group:

Observed behaviors	Observe intervals		1st				2nd				9th			
	Time		<input type="checkbox"/>				<input type="checkbox"/>							
Learning-related behaviors	individual	Students' numbers	1	2	3	4	1	2	3	4	1	2	3	4
		Set up or operate the TabPCs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Do practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Do test	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Use Skype	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Idle helper (ignore help request)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	inter-group	Peer-assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Teach another to learn materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Teach another to use TabPC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Be taught to use TabPC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Be taught to learn materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Waiting for peer-assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Ask for help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		negotiation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	intra-group	discussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Peer-assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Teach another to learn materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Teach another to use TabPC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Be taught to use TabPC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Be taught to learn materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Waiting for peer-assessment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Ask for help	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		negotiation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		discussion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Sharing with group mates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Encouraging group mates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watching group mates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Learning-unrelated behaviors	Students' numbers	1	2	3	4	1	2	3	4	1	2	3	4	
	Chatting with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Playing with others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Moving around	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Catnapping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Playing alone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Abstracted	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Leaving seat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Looking around	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Other behaviors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



# Review of *podOmatic*

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In Hampel and Hauck (2004) the basic second language learning theory is summarized as follows: "For language acquisition to take place, students must be provided with comprehensible input (Krashen, 1981, 1985), they have to be able to interact to negotiate leaning (Gass & Varonis, 1994; Varonis & Gass, 1985), and they must produce comprehensible output (Swain, 1985)." In accordance with this basic theory, most language instruction starts with a good amount of comprehensible input and with the advent of Communicative Language Teaching and other communicative types of teaching methodologies, students are forced to interact with either other learners or the teacher to negotiate meaning. However, while trying to find grounds for learners to communicate and produce comprehensible output, the lack of native speakers has always been seen as something which reduces the effectiveness of communication in that it was not authentic. For years, many institutions have hired native speakers—not necessarily ELT teachers—and made them responsible for speaking classes as the easiest way to solve this problem. The success of this approach can be discussed; however, the dependence upon such outer resources is losing its power in today's world as new technologies enable us to communicate internationally without any charge and with good audio and even video quality. In this paper, one of these technologies, podcasting, is going to be touched upon and a web-site which enables even the most novice users to use this kind of high-tech technology is reviewed.

## What is Podcasting?

As it is stated in Wikipedia, podcasting is:

*"...the distribution of audio or video files, such as radio programs or music videos, over the Internet using either RSS (Real Simple Syndication) or Atom syndication for listening on mobile devices and personal computers. The term podcast, like "radio", can mean both the content and the method of delivery. Podcasters' websites also may offer direct download of their files, but the subscription feed of automatically delivered new content is what distinguishes a podcast from a simple download or real-time streaming. Usually, the podcast features one type of "show" with new episodes either sporadically or at planned intervals such as daily, weekly, etc. In addition to this, there are podcast networks that feature multiple shows on the same feed. Podcasting's es-*

sence is about creating content (audio or video) for an audience that wants to listen when they want, where they want, and how they want." (<http://en.wikipedia.org/wiki/Podcast> retrieved April 8, 2006)

When we examine this definition closely, it is easy to see that podcasting is a part of a new era where we can get asynchronous audio and video. In terms of language teaching, podcasting creates more opportunities for the learners to practice their listening skills outside the classroom, and in this way the boundaries of the classroom is extended. As is stated by Stanly (2005), podcasting not only gives students extra possibilities of listening both inside and outside the classroom but also expands the scope of the classroom by making the students involved in creating content for their own audience and building communities with other classes and students around the world.

Not so long ago, to be able to podcast, users were required to have some HTML knowledge, and the process was not simple. In order to publish a podcast, first of all an XML file needs to be created with a closure tag, an MP3 format sound file needs to be recorded and uploaded to a specific server, and lastly the XML feed needs to be fed into a Podcast "catcher" program such as *iTunes* or *Podcatcher*. This whole process sounds complicated for a novice web user, making Podcasting sound like an activity only for professionals. *PodOmatic* is a website which enables even the most novice users to be able to podcast with very simple steps and is the focus of this review.

## How to use PodOmatic

As it is stated in *About Us* section of the web-site, "*PodOmatic* is the leading provider of free, web-based tools and services that enable anyone to easily find, create, distribute, promote and listen to podcasts and videocasts" and state that they provide "Simple and Fun Podcasting for everyone!". The procedure for setting up a podcast are outlined below:

### a. Registering

Registering in *PodOmatic* includes very simple steps. By clicking the "register" link on the top-right section of the main page the users are provided with a registration form and then they are asked to fill in some basic information. After filling in the basic information and submitting it, a confirmation email is sent to the user's account to complete the registration.

After these simple steps to complete registration, the user is ready to start podcasting, and is taken to the main page of *PodOmatic* and there a wide range of podcasts, including a "Recently updated podcasts" section, which allows users to subscribe or alternatively find links for creating their own podcast.

### b. Recording and Publishing a Podcast

By clicking the "Podcasts" and then "Post Episode" links, the user is taken to the page where the recording and publishing of a podcast can be completed in seconds. In the "Post Episode" page the users are first asked to put in a title for the episode of that podcast, which can be anything the user wants. The "Tags" section of the form is required to



Figure 1. Registering PodOmatic and main user page

integrate some keywords about that podcast into the search engine and make it easy for the other users to reach this specific episode. After providing the tag information, the user is asked to put his/her podcast into a category from the wide range of possible categories present. Then, the user is asked to put a picture for that specific podcast, although this is optional. Lastly, the user is asked to mark their podcasts as either “explicit” or “clean”. What is meant by this is that as podcasting has increased in number so have the number of “non-educational” podcasts, and some of the podcasts include some profanity and even violence. By marking “clean” or “explicit” the user gives a disclaimer to the listeners about the content of the episode.

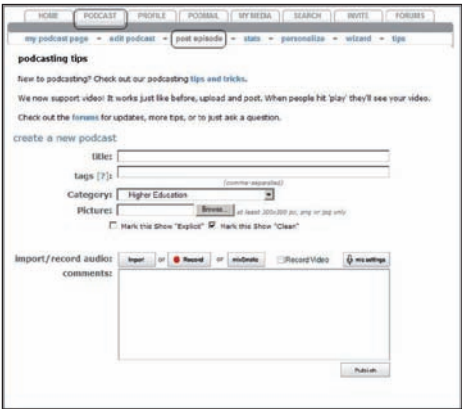


Figure 2. Posting a podcast



After filling in the basic information for a specific episode, the next step is recording the episode online, or importing an MP3 format audio to the server. By simply plugging the microphone to the appropriate jack of the computer and clicking record button the user can start recording the episode online. The length and quality of the podcast is user determined. That is to say, the equipment used, such as the recording software and microphone, has a great impact on the quality of the podcast, and the length of the episode has something to do with the size of the file to be uploaded and downloaded. Keeping these at an optimal level, manageable sizes of episodes can be reached.

If the episode is already recorded on a computer, it can be uploaded to the *PodOmatic* server by pressing the import button.

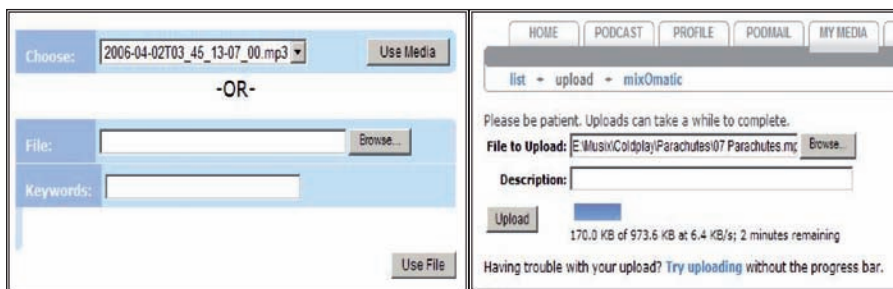


Figure 3. Uploading an episode mp3

If the recording is to be done online with *PodOmatic* tools then the "Record" button is clicked. Clicking this button brings us a "Settings" dialogue and asks if we want to allow *PodOmatic* page to access our microphone or camera. By pressing "Allow" the recording session is started and after recording desired episode, the "Stop Rec" button is clicked and the user is taken to the "Review podcast" step. In this step, the recorded audio can be previewed and if the result is not satisfactory, another recording can be done by pressing "Re-record" button.

On completion of recording the desired episode, the next step is publishing the podcast episode and getting the RSS feed to distributing episode and make the podcast known to everyone and attract subscribers. After clicking the "Publish" button, the user is taken to the screen where s/he is given the opportunity to send the RSS feed link to his/her contacts. By simply entering the account information of one of the widely used mail providers, the user can send the feed for his/her podcast to everyone in his/her contact list of that specific account. This way, the number of subscribers increases and the target audience for the podcast expands.

After completing this step, the podcast is ready to be listened to by the audience. The website promotes software named *PodAmigo*, which easily gets the RSS feeds and updates the podcasts as they are updated by the podcaster. Another way of following the podcasts is through using *iTunes* by Apple. In *iTunes*, by clicking on the advanced tab and "Subscribe to podcast" the user can easily paste the RSS feed given by *PodOmatic* and be a subscriber of the podcast created.

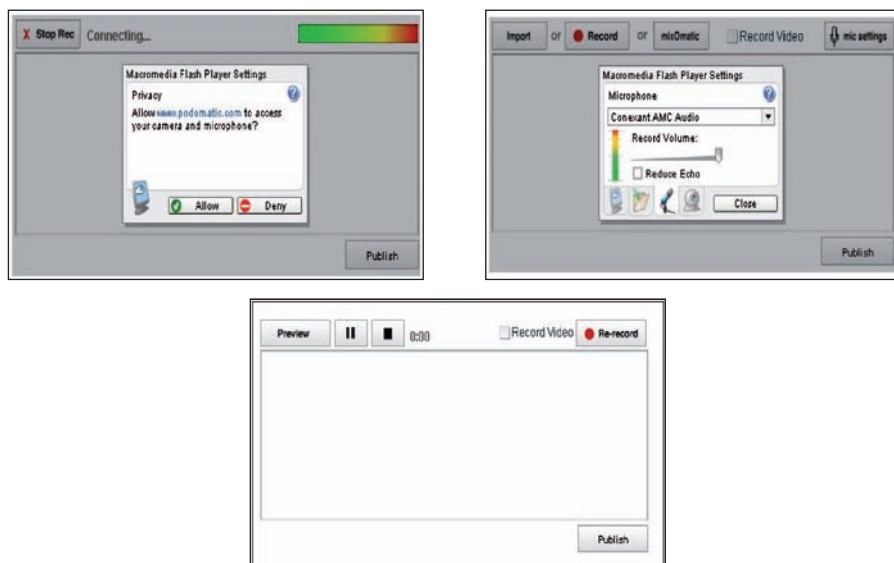


Figure 4. Recording settings and recording preview

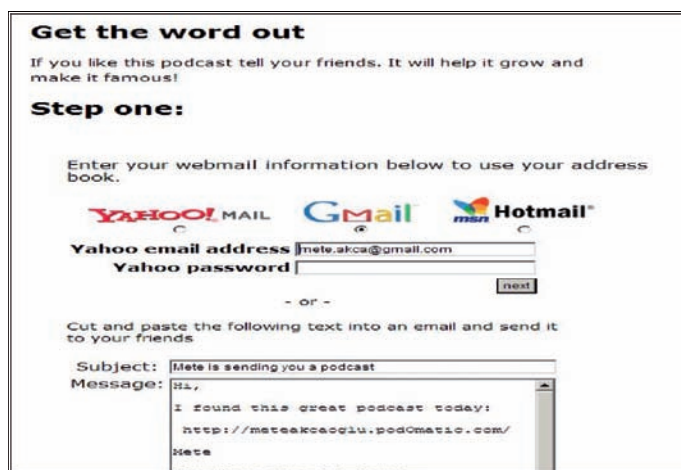


Figure 5. Sending the feed information to the email contacts.

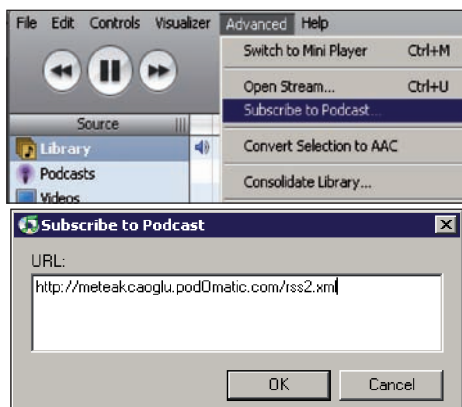


Figure 6. Subscribing to podcast in iTunes

The RSS feeds and the Podcast webpage are named in a very simple manner:

- <http://username.podOmatic.com/rrs2.xml> is the RSS feed
- <http://username.podOmatic.com> is the podcast's main page.

Publishing the podcasts is made quite easy in PodOmatic as it is explained here. Each episode of the podcast follows the same routine. By pasting the given RSS feed into your podcatcher software, the user does not have to worry about updating the podcasts, since the software will automatically check for an update and download the newest one available. Another way of doing this is visiting the podcast webpage which is in a *http://username.podOmatic.com* format.

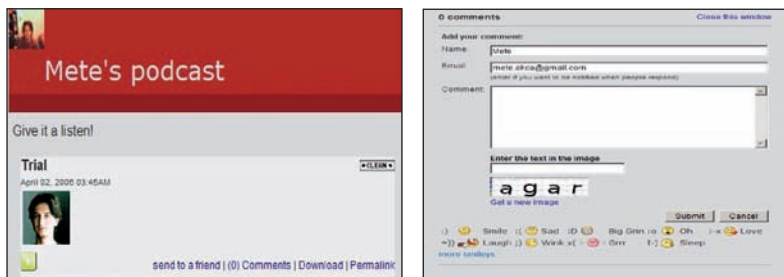


Figure 7. Podcast main page and leaving a comment

In this main page of the podcast, visitors can find every podcast published, with the newest one being on the top. This page also provides a link for the episodes from which the

users can alternatively download each mp3 file and listen to them by using any mp3 player software (including Windows Media Player). Moreover, by clicking on the “Comments” link, visitors can leave a comment on the episode, which can be anything related to the podcast.

In addition to these, the main podcast page also gives users the opportunity to listen to the podcast online. By clicking the green “Play” button under the episode picture, visitors can listen to the podcast in a new browser window as shown below.



Figure 8. Listening to a podcast online

### c. Customization of the Podcast and Creating a Profile

Another user-friendly aspect of this website is that it allows users to modify their published podcasts easily, as well as the fact that users can create their own profile which can be reached through the main podcast page. The creation of such a profile helps users to provide listeners with background information about themselves.

After creating a podcast, users might want to change the content or delete a podcast permanently for some reason. In such cases, the previous podcasts can be reached by clicking “Podcast” and then “Edit Podcast”.



Figure 9. Reaching the podcast editing page

In the “Edit Podcast” page, users are provided with the option of editing a podcast as well as an option to delete a podcast. If a user wants to delete a podcast, by clicking on the delete link, s/he is asked for confirmation and by clicking the “Delete associated media” button the file is deleted.



Figure 10. Deleting an episode.

Moreover, if a user only wants to change the name, the tags, the pictures or the content of the podcast, clicking the "Edit" link takes him/her to the "Edit podcast" page where s/he can change all of the information about that specific published podcast.



Figure 11. Editing a Podcast

Basic modifications on published podcasts are done through the steps mentioned above. In addition to this, the webpage also offers a statistics page where the number of subscribers, downloads and visitors can be seen in a detailed way. This tool can be reached via "Podcast" and then "Stats" links successively. On this page, every statistical detail and a description of the terms is presented in a meaningful manner to the users.

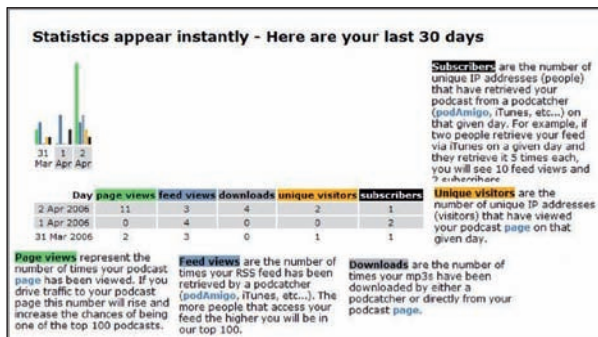


Figure 12. Statistics page

Users can also decide whether to include a personal profile with the podcasts published. If the users decide to do so, the profile page can be reached through "Podcast > Personalize > Profile" links. In the profiles page, the user first decides what to include in terms of personal information. These can be "About me", "My Friends", "Fans of this Podcast", or "My Podroll."

podcast   links   iTunes   phone   pro

### Profile Options

Choose which portions of your **profile** you would like to include on your podcast page.

☐ About Me

☐ My Friends

☐ Fans of this Podcast

☐ My Podroll (favorite podcasts from my profile page)

save all preferences

Figure 13. Profile Selection

Putting a tick next to these boxes creates links for these pages on the main podcast page. On the same page, the "Podcast" tab allows users to make some modifications to the layout and the content of the main podcast page and the podcasts published.

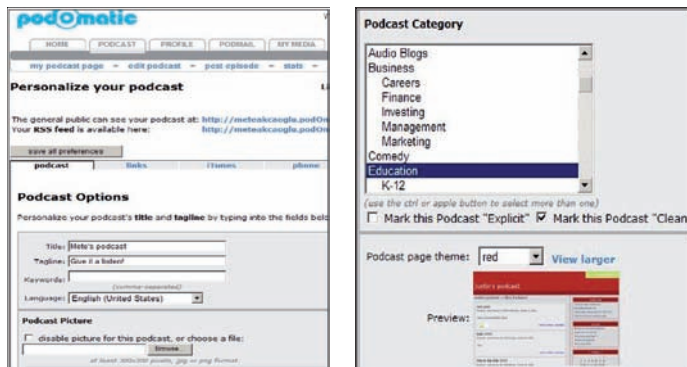


Figure 14. Podcast page layout and published Podcast options

As for creating and editing a user profile, in order to create a profile the users need to go to the "Profile> Edit Profile" page.

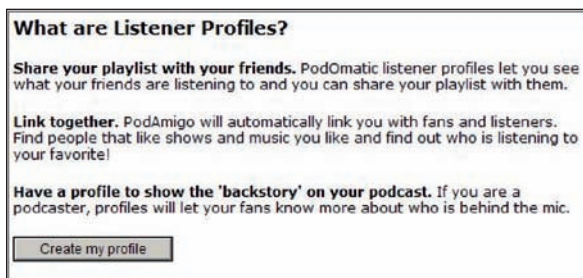


Figure 15a. Creating a profile through Profile>Create Profile page

By pressing the create profile button the users are taken to a page where some profile information needs to be provided.

**Step 1 - Create your profile (three to go)**

First Name:

Last Name:

Gender:

Birthdate:

Hometown:

City:

State:

Zip Code:

Country:

About Me: Describe yourself. Tell about what you like or don't like, or just say anything you want.

Interests: List topics you're interested in, separated by commas, preferably using short single-word phrases. Music, Movies are the good form for comedians.

**Step 2 - See what your friends are listening to (2 steps to go).**

Yahoo email address:

Yahoo password:

Use addressbook

OR

Cut and paste the following text into an email and send it to your friends

Subject: Connect our status

Message: Hi,

podomatic is a social network that connects everyone's playlists.

Click on the link to see what I'm listening to:

<http://www.podomonic.com/link/14343a2a312b0d439f804f4f42b5>

Rate

Step to step 4

Figure 15b. Creating a profile through the Profile>Create Profile page

After putting in the required information, a user profile is created, which can be viewed through the podcast main page.

By creating a profile and modifying the published podcasts, *PodOmatic* allows users to get a personalized page which enables them to widen their audience and allows visitors to get information on the creators of the podcasts they are listening to, and in this way a podcasting community is created.

#### d. Facilitators

The PodOmatic webpage has a user-friendly design which allows users to navigate easily and smoothly around the pages and the sub-sections of the site. One of the user-friendly elements found on every page is the menu on the right side of the page. Here, posting a new podcast, personalizing an existing one, visiting the podcast main page and seeing the storage usage statistics can be reached by just one click. This really makes the navigation simple, easy and effective.

**Manage**

- post
- personalize my podcast
- my podcast page
- You are using 1.6 MB of 500.0 MB storage allowed.
- You are using 264.5 KB of 7.5 GB bandwidth allowed for the month.
- [Click here to upgrade!](#)

**Contact Info**

- podMail: meteakcaoglu@podomatic.com
- Join my mailing list
- Record a comment

**podMail: meteakcaoglu@podomatic.com**

- Join my mailing list
- Record a comment

**podOmatic Services**

- Search podcasts
- Create a podcast
- podAmigo™
- podMail

**Favorite Links**

- podOmatic
- podAmigo

Figure 16. Permanent right menu for podcasters



For visitors to the podcast main page, there is also a right menu which enables them to easily subscribe to the podcast they are viewing at that time. There is an *iTunes* button which directly adds podcasts RSS feed into *iTunes*. Moreover, with the help of the links the RSS feed can also be added to *Google*, *My Yahoo!* and *NewsGator*. This feature saves the novice users from dealing with complex XML URLs and makes the whole subscription a click-and-go process.



Figure 17. Permanent right menu for visitors on podcast main page

Apart from these additional features, *PodOmatic* also gives users an email account which can be accessed with the same username and password. *PodMail* is reached via the *podmail* tab on the top of the page. This email service has a decent amount of storage (500 MB) and functions just like other email providers.



Figure 18. PodMail main page

In addition to *PodMail*, *PodOmatic* gives its users a chance to communicate with other podcasters via a forum. The "Forum" link can be reached through the navigation panel on the top of the page as well. The forum functions like a normal forum, and the main topics are determined by the website. The users can go in any topic and join a discussion.

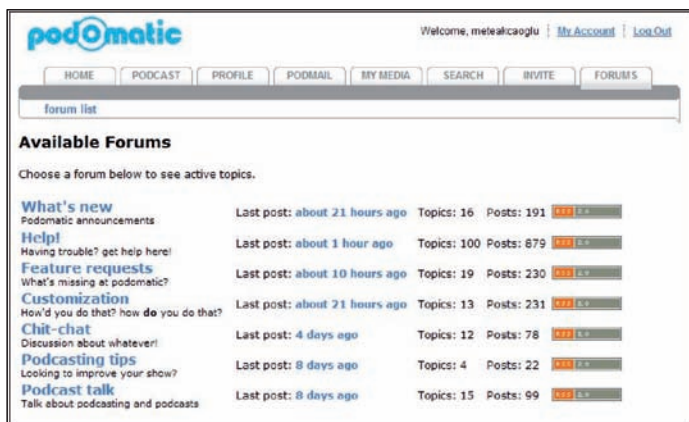


Figure 19. Forum main page

There is also a search function, which can be found on the main navigation panel, and gives users a chance to search for podcasts created on specific topics. The search page has a simple layout and by typing in either the podcast name or a keyword a podcast search can be managed easily.



Figure 20. Search main page

All of these features mentioned above add to the user-friendliness of *PodOmatic*, making it a very easy to use website for even the most novice users. Making podcasting a very easy process, *PodOmatic* presents an invaluable ground for language learners and teachers to take their part in the constantly growing podcasting world and make use of podcasting to the fullest.

## Final Comments

*"Stipulations aside, technologies, mobile or otherwise, can be instrumental in language instruction. Ultimately, though, they are not in and of themselves instructors; rather, they are instructional tools. And the effective use of any tool in language learning requires the thoughtful application of second language pedagogy." (Chinnery, 2006, p. 9)*

As it is stated above, any language technology can have pros and at the same time cons, and the trick is finding the best way to integrate them. Podcasting has revolutionized the old radio broadcasts and makes them available for anyone, at any time they want from anywhere in the world. As is stated by Stanley (2005), the idea that a podcast can be produced by just about anyone with access to the Internet has generated a lot of interest in educational circles. In ELT, the appeal is not only in providing additional listening input for students, but that students themselves can become involved in recording and producing the podcast. Moreover, Stanley (2005) categorizes podcasts into three classes:

- authentic podcasts
- teacher podcasts
- student podcasts

In accordance with this categorization, it can be seen that podcasting can also be used by language learners, where they record and publish their projects and listen to friends' projects. Keeping this in mind, and taking the fairly hard process of publishing a podcast into account in the past, one can easily see how useful *PodOmatic* can be for both language learners and teachers. In just a matter of a few clicks, users can get a podcast published in *PodOmatic*. Achieving this complicated process by spending just a few minutes is a ground breaking innovation.

In the corporate fact sheet of *PodOmatic* it is stated that until recently, podcasting had been restricted to the crafty, tech-savvy and patient and some podcasters had spent hundreds of dollars on complicated audio equipment and software for producing their shows; moreover, many would-be podcasters were confronted with an array of technical hurdles (i.e., recording software, RSS and XML syndication, hosting, etc). *PodOmatic* claims that by simplifying the process and making podcasting accessible and free for everyone, they have expanded the technology's viral growth and become the industry leader.

*PodOmatic* is a really user-friendly, click-and-go website. By completing a very simple sign-up form, users are introduced to the almost endless world of podcasting. Keeping the innovations in MALL (mobile assisted language learning) in mind, enabling everyone to publish podcasts so easily makes *PodOmatic* an invaluable resource for everyone in language learning business (teachers, learners and educators), and through the use of *PodOmatic*, the amount of broadcasts available for language learning can only be expected to increase in the future.

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## Timothy Gutierrez (Coordinator)

[sig-coordinator@jaltcall.org](mailto:sig-coordinator@jaltcall.org)

Greetings everyone!

I am pleased to announce some of the CALL SIG's successes during the past eight months of 2006. The JALTCALL2006 conference was a success as both as a program of current research in CALL and financially. The SIG shipped JALT CALL Journal Volume 2, Numbers 1 through 2. The SIG joined with many of JALT's financially healthy chapters and SIG to support JALT national's membership database upgrade through donating 500,000 yen which equalled the contribution of the most financially stable chapters.

In addition to all the excitement of CALL SIG activity, I am also living through the excitement of becoming a father for the first time. While I have benefited immensely from work and I have enjoyed the time I invested in running the CALL SIG, I want to be as available as possible to my family during these important early years of my son's life. Therefore, I will not be standing for SIG office at the AGM in November.

The AGM is scheduled for Friday, November 3 from 14:25 - 15:25 at the JALT national conference in KitaKyushu. Full details of the conference are located at <[conferences.jalt.org/2006](http://conferences.jalt.org/2006)>. Since the AGM is the opportunity for the current members and all those interested in joining to meet in person and discuss the future direction of the CALL SIG, I hereby invite all members to attend. If there are any items members would like to put on the meeting agenda, please contact me at [sig-coordinator@jaltcall.org](mailto:sig-coordinator@jaltcall.org).

For anyone willing to volunteer as coordinator for 2007, there are several ongoing projects which will need your supervision. JALTCALL2007 is scheduled for June 3-4 at Waseda University. The conference will be chaired by Paul Lewis and myself. Volume 3, Numbers 1-3 of the JALT CALL Journal is scheduled to be released in April, July and October of 2007. The Journal editors will be Glenn Stockwell and Malcolm Swanson. Also, there is a book of papers entitled "Digital Discourses" to be edited by Paul Mason.

Also requiring a coordinator's attention are the SIG's obligations to its members, the parent organization, JALT national, as well as to the language teaching community at large. As the SIG has all the characteristics of a medium-sized research supporting organization (i.e. publishing books and a journals; hosting a medium sized conference; and planning programs alone and in conjunction with JALT chapters), the SIG will need many volunteers to coordinate its activities. Coordinating the SIG is a big job, but a rewarding one.

I thank all the members for allowing me to have the experience of coordinating the SIG for these past five years.

## Ali Campbell (Treasurer)

[sig-treasurer@jaltcall.org](mailto:sig-treasurer@jaltcall.org)

The JALTCALL 2006 conference in Sapporo was a success not only in terms of the numbers of participants and very positive feedback that Don refers to (above/below). We were also safe and sound financially. Indeed, having produced the account for the conference, I can confirm that a modest surplus was made. This sum was large enough for us to feel that we had a reasonable cushion against risk (for example, of delegates not turning up), and yet not large enough to make us think that the prices charged to members and associate members were over the top.

Along with printing of the JALT CALL journal three times per year, the annual conference is our biggest financial concern. It can make or break our end-of-year balance. Yet a review of our annual reports for the last five years shows that we managed to make surpluses in four of them, admittedly some more comfortable than others. The remaining year produced a deficit, and is a reminder that we are not infallible and that we need to continue to produce reliable and consistent records, for ourselves as much as for JALT Central Office.

We are now in the process of taking even greater control of our finances than previously. One reason for doing so is the necessity of budgeting for conferences two years in advance. Many university venues in Japan operate this far ahead and, of course, so does the A-list of potential conference keynote speakers on the global circuit. Over the next few years we will strive to generate financial data that will help the officers and conference chairs to make safer, more informed decisions in carrying out the business of our SIG.

## Douglas Jarrell (Membership)

[sig-membership@jaltcall.org](mailto:sig-membership@jaltcall.org)

Dear Members,

It looks as though the number of sig members continues to go up, albeit slowly. I counted 344 as of July 2006. I think the quality of the JALT CALL Journal is helping to make the sig better known both nationally and internationally. Recently I had someone in Taiwan showing interest in becoming a member, and I predict that our number of overseas subscribers will increase.

I have a request for all our members. After the last batch of journals were mailed, a few copies were returned to us. Apparently the recipient had moved and may have expected his or her mail to be forwarded. Due to costs, however, JALTCALL uses a mail delivery service instead of the regular post office. This means that the journal will not get sent on to a new address unless we know it, so be sure to get in touch with me as soon as your address changes.

## Paul Daniels (Telecommunications)

**sig-communications@jaltcall.org**

Dear Members,

After returning from JALTCALL conference in Hokkaido where I enjoyed inspirational discussions and caught up with old friends, I am back at work on the JALTCALL site. This year, much of the success of the conference was due to efficient communication among the conference team. Much of the team's communication was supported by the popular course management system called Moodle. Using Moodle's forums, we were able to preserve our decision making process and discussions for future conference organizers. As well as pre-conference communication, the post conference feedback and handout repertoire was also hosted using a Moodle course set up at: <ept3.sgu.ac.jp>. This data will later be archived to the JALTCALL site.

At the JALTCALL site <jaltcall.org>, we have added several new features for SIG members as well. First, we added a CALL SIG members' general discussion forum at <www.jaltcall.org/lms/course/view.php?id=7>. We encourage CALL members to ask questions and share CALL related experiences via this forum.

In addition to the CALL SIG general forum, we are creating a database of technology-related sites. Members can add their own CALL site or their favorite technology site along with a short description to the SIG database.

Finally, the new member's area provides SIG members the opportunity to share materials or self-authored software. Materials may include Flash templates, Hot Potatoes quizzes, Moodle courses, or other open source software. Please visit the CALL SIG members' area at <www.jaltcall.org/lms/course/view.php?id=7> to upload software or material.

To register to use the new SIG members' space, please click on the 'Create new account' button. You will then be able to upload or download material to the members' database and be able to choose whether to receive forum posts via email by editing your profile.

## Don Hinkelman & Peter Ruthven-Stuart (Program)

**sig-membership@jaltcall.org**

Dear Members,

Without taking a breath from hosting the JALTCALL 2006 annual conference, our program team is gearing up for a regional workshop on Saturday, October 21st at Sapporo Gakuin University. The mini-conference will feature over 16 presentations and workshops for novice CALL teachers, under the theme of "Everyday Teaching with CALL". Bill Pellowe is confirmed as a guest workshop leader on computer basics, offering his friendly, easy-to-understand manner to teach a variety of skills on simple CALL ap-

plications. Information is available at <http://englishforum.sgu.ac.jp/callworkshop/> and proposals for presentations will be welcomed until September 15th.

The 11th Annual Conference in Sapporo was a strong success despite initial concerns that hosting a large conference outside of the Kansai/Kanto metropolitan areas would not attract participants. Fortunately, 175 registered delegates made the trip "up" to cool Hokkaido to enjoy some northern hospitality, equalling the number at last year's conference in Kyoto. Josef Colpaert, editor of the CALL Journal, flew from Antwerp, Belgium as the keynote speaker and delighted the crowd with his insightful presentation on the direction of CALL in this decade, and even contributed a corpus analysis of the abstracts of the conference (note: "learning" was the most frequent keyword). According to the online poll (still open at <http://ept3.sgu.ac.jp>), 81% thought this conference was above average or excellent. In the comments, some of the highlights of conference were:

- wireless environment (free internet in classrooms)
- good plenary talk on Sunday
- knowledgeable presenters, state-of-art hardware and software
- upscale ambiance, well organized
- great evening reception, food and drink excellent
- unstuffy atmosphere and feet firmly on the ground focus
- venue used very well, compact, easy walk between two buildings
- coffee and snacks a great touch
- able to download materials from the conference website, even during the presentations

Note: over 90 files of handouts, slideshows, demos and code are still available for download in the digital repository at the conference "ept3" website. In addition, the "Whole Conference Feedback" provides a helpful list of suggestions to remember for the next conference in June 2007 at Waseda University.

### **Michael Johnson (Member-at-large)**

Greetings all,

It was a pleasure to meet many of you at the Hokkaido conference and pleased to see a number of new faces as well. As we countdown to the national conference I encourage participation. Run for office as there may be an opening or two. The CALLSIG is a dynamic enjoyable group to work with. We are always interested in fresh ideas leading to rewarding outcomes.

Until November . . .



